

USER'S MANUAL

Multimedia PC



V13.1.10

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Preface

R&TTE Directive

This device is in compliance with the essential requirements and other relevant provisions of the R&TTE Directive 1999/5/EC.

This device will be sold in the following EEA countries: Austria, Italy, Belgium, Liechtenstein, Denmark, Luxembourg, Finland, Netherlands, France, Norway, Germany, Portugal, Greece, Spain, Iceland, Sweden, Ireland, United Kingdom, Cyprus, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Slovakia, Poland, Slovenia.

ErP Off Mode Power Consumption Statement:

The figures below note the power consumption of this computer in compliance with European Commission (EC) regulations on power consumption in off mode

- Off Mode < 0.5W

CE Marking

This device has been tested to and conforms to the regulatory requirements of the European Union and has attained CE Marking. The CE Mark is a conformity marking consisting of the letters “CE”. The CE Mark applies to products regulated by certain European health, safety and environmental protection legislation. The CE Mark is obligatory for products it applies to: the manufacturer affixes the marking in order to be allowed to sell his product in the European market.

This product conforms to the essential requirements of the R&TTE directive 1999/5/EC in order to attain CE Marking. A notified body has determined that this device has properly demonstrated that the requirements of the directive have been met and has issued a favorable certificate of expert opinion. As such the device will bear the notified body number 0560 after the CE mark.

The CE Marking is not a quality mark. Foremost, it refers to the safety rather than to the quality of a product. Secondly, CE Marking is mandatory for the product it applies to, whereas most quality markings are voluntary.

FCC Statement (Federal Communications Commission)

You are cautioned that changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Re orient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the service representative or an experienced radio/TV technician for help.

Operation is subject to the following two conditions:

1. This device may not cause interference.
And
2. This device must accept any interference, including interference that may cause undesired operation of the device.

FCC RF Radiation Exposure Statement:

1. This Transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.
2. This equipment complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20 centimeters between the radiator and your body.



Warning

Use only shielded cables to connect I/O devices to this equipment. You are cautioned that changes or modifications not expressly approved by the manufacturer for compliance with the above standards could void your authority to operate the equipment.

IMPORTANT SAFETY INSTRUCTIONS

Follow basic safety precautions, including those listed below, to reduce the risk of fire, electric shock, and injury to persons when using any electrical equipment:

1. Do not use this product near water, for example near a bath tub, wash bowl, kitchen sink or laundry tub, in a wet basement or near a swimming pool.
2. Avoid using this equipment with a telephone line (other than a cordless type) during an electrical storm. There may be a remote risk of electrical shock from lightning.
3. Do not use the telephone to report a gas leak in the vicinity of the leak.
4. Use only the power cord and batteries indicated in this manual. Do not dispose of batteries in a fire. They may explode. Check with local codes for possible special disposal instructions.
5. This product is intended to be supplied by a Listed Power Unit (Full Range AC/DC Adapter – AC Input 100 - 240V, 50 - 60Hz, DC Output 19V, 4.74A, **90W**).

This Computer's Optical Device is a Laser Class 1 Product

Instructions for Care and Operation

The computer is quite rugged, but it can be damaged. To prevent this, follow these suggestions:

1. **Don't drop it, or expose it to shock.** If the computer falls, the case and the components could be damaged.
2. **Keep it dry, and don't overheat it.** Keep the computer and power supply away from any kind of heating element. This is an electrical appliance. If water or any other liquid gets into it, the computer could be badly damaged.
3. **Avoid interference.** Keep the computer away from high capacity transformers, electric motors, and other strong magnetic fields. These can hinder proper performance and damage your data.
4. **Follow the proper working procedures for the computer.** Shut the computer down properly and don't forget to save your work. Remember to periodically save your data as data may be lost.
5. **Take care when using peripheral devices.**

Power Safety

The computer has specific power requirements:



Power Safety Warning

Before you undertake any upgrade procedures, make sure that you have turned off the power, and disconnected all peripherals and cables (including telephone lines and power cord).

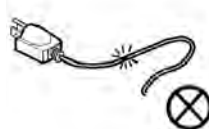
You must also remove your battery in order to prevent accidentally turning the machine on. **Before removing the battery disconnect the AC/DC adapter from the computer.**

- When you want to unplug the power cord, be sure to disconnect it by the plug head, not by its wire.
- Make sure the socket and any extension cord(s) you use can support the total current load of all the connected devices.
- Before cleaning the computer, make sure it is disconnected from any external power supplies.

Do not plug in the power cord if you are wet.



Do not use the power cord if it is broken.



Do not place heavy objects on the power cord.



Polymer Battery Precautions

Note the following information which is specific to polymer batteries only, and where applicable, this overrides the general battery precaution information overleaf.

- Polymer batteries may experience a slight expansion or swelling, however this is part of the battery's safety mechanism and is not a cause for concern.
- Use proper handling procedures when using polymer batteries. Do not use polymer batteries in high ambient temperature environments, and do not store unused batteries for extended periods.

See also the general battery precautionary information overleaf for further information.

Battery Precautions

- Only use batteries designed for this computer. The wrong battery type may explode, leak or damage the computer.
- Do not remove any batteries from the computer while it is powered on.
- Do not continue to use a battery that has been dropped, or that appears damaged (e.g. bent or twisted) in any way. Even if the computer continues to work with a damaged battery in place, it may cause circuit damage, which may possibly result in fire.
- If you do not use the battery for an extended period, then remove the battery from the computer for storage.
- Recharge the batteries using the notebook's system. Incorrect recharging may make the battery explode.
- Do not try to repair a battery pack. Refer any battery pack repair or replacement to your service representative or qualified service personnel.
- Keep children away from, and promptly dispose of a damaged battery. Always dispose of batteries carefully. Batteries may explode or leak if exposed to fire, or improperly handled or discarded.
- Keep the battery away from metal appliances.
- Affix tape to the battery contacts before disposing of the battery.
- Do not touch the battery contacts with your hands or metal objects.



Battery Disposal & Caution

The product that you have purchased contains a rechargeable battery. The battery is recyclable. At the end of its useful life, under various state and local laws, it may be illegal to dispose of this battery into the municipal waste stream. Check with your local solid waste officials for details in your area for recycling options or proper disposal.

Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the manufacturer. Discard used battery according to the manufacturer's instructions.

Cleaning

Do not apply cleaner directly to the computer, use a soft clean cloth.

Do not use volatile (petroleum distillates) or abrasive cleaners on any part of the computer.

Servicing

Do not attempt to service the computer yourself. Doing so may violate your warranty and expose you and the computer to electric shock. Refer all servicing to authorized service personnel. Unplug the computer from the power supply. Then refer servicing to qualified service personnel under any of the following conditions:

- When the power cord is damaged or frayed.
- If the computer has been exposed to any liquids.
- If the computer does not work normally when you follow the operating instructions.
- If the computer has been dropped or damaged (do not touch the poisonous liquid if the LCD panel breaks).
- If there is an unusual odor, heat or smoke coming from your computer.



Removal Warning

When removing any cover(s) and screw(s) for the purposes of device upgrade, remember to replace the cover(s) and screw(s) before restoring power to the system.

Also note the following when the cover is removed:

- Hazardous moving parts.
- Keep away from moving fan blades.

Ergonomics

We designed your Multimedia PC system to be functional as well as attractive. To get most out of it, here are some suggestions on how to position and use the computer:

- The top third of the LCD (screen) should be at eye-level or slightly below.
- The LCD should be at least 18"/45cm. directly in front of you.
- If the screen resolution makes you strain to read, then adjust the resolution to something more comfortable (see *“Video Features” on page 1 - 35*).
- Angle the LCD (see *“Tilting the LCD Screen” on page 1 - 8*) so that it doesn’t reflect any light into your eyes.
- Use a chair which offers good back support (especially lower-back). The seat should allow your feet to rest flat on the floor or on a footrest directly in front of you.
- If possible, illuminate your work area with natural daylight or use a steady-glowing (non-flickering) light source.
- Place the keyboard and mouse so that your arms are at your sides and your forearms are roughly parallel to the floor. Your wrists should flex slightly downward as you work. Your neck and shoulders should also be relaxed.
- Take a break from the computer. Get up, stretch, flex your wrists, walk about, and look at something else for about 10 minutes every hour.

Lighting

Proper lighting and comfortable display viewing angle can reduce eye strain and muscle fatigue in your neck and shoulders.

- Position the display to avoid glare or reflections from overhead lighting or outside sources of light.
- Keep the display screen clean and set the brightness and contrast to levels that allow you to see the screen clearly.
- Position the display directly in front of you at a comfortable viewing distance.
- Adjust the display-viewing angle to find the best position.

LCD Screen Care

To prevent **image persistence** on LCD monitors (caused by the continuous display of graphics on the screen for an extended period of time) take the following precautions:

- Set the *Windows* **Power Plans** to turn the screen off after a few minutes of screen idle time.
- Use a rotating, moving or blank screen saver (this prevents an image from being displayed too long).
- Rotate desktop background images every few days.
- Turn the monitor off when the system is not in use.



Carrying the Computer

We strongly recommend using both hands to move the computer (one hand gripping the handle area and the other gripping the computer) to avoid accidentally dropping it. Be careful that objects such as belt buckles etc. do not scratch the screen while it is being carried.

Wall Mounting Information

The computer may be mounted on a wall for display. The system meets VESA MIS-D Standard (100mm * 100mm) for wall mounting. However if you intend to wall mount the system please contact your service center for information in order to avoid personal injury, or damage to the computer.

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Chapter 1: Quick Start Guide - Windows 8.1

Overview

This Quick Start Guide is a brief introduction to the basic features of your computer, to navigating around the computer and to getting your system started. The remainder of the manual covers the following:

- **Chapter 2** A guide to using some of the main features of the computer e.g. the **storage devices (hard disk, optical device, Multi-in-1 card reader, ExpressCard/34/54) Audio & Printer**.
- **Chapter 3** The computer's **power** saving options.
- **Chapter 4** The installation of the **drivers** and utilities essential to the operation or improvement of some of the computer's subsystems.
- **Chapter 5** An outline of the computer's built-in software or **BIOS** (Basic Input Output System).
- **Chapter 6** Instructions for **upgrading** your computer.
- **Chapter 7** A quick guide to the computer's **PC Camera, Wireless LAN, Bluetooth & WLAN Combo and Trusted Platform (Security)** modules (some of which may be **optional** depending on your purchase configuration).
- **Chapter 8** A **troubleshooting** guide.
- **Appendix A** Definitions of the **interface, ports/jacks** which allow your computer to communicate with external devices.
- **Appendix B** Information on the **Intel video** driver controls.
- **Appendix C** The computer's **specification**.

Advanced Users


If you are an advanced user you may skip over most of this Quick Start Guide. However you may find it useful to refer to *“What to Install” on page 4 - 1*, *“BIOS Utilities” on page 5 - 1* and *“Upgrading The Computer” on page 6 - 1* in the User’s Manual. You may also find the notes marked with a  of interest to you.




Notes

Check the light colored boxes with the mark above to find detailed information about the computer’s features.

Beginners and Not-So-Advanced Users

If you are new to computers (or do not have an advanced knowledge of them) then the information contained in this Quick Start Guide should be enough to get you up and running. Eventually you should try to look through all the documentation (more detailed descriptions of the functions, setup and system controls are covered in the remainder of the User’s Manual), but do not worry if you do not understand everything the first time. Keep this manual nearby and refer to it to learn as you go. You may find it useful to refer to the notes marked with a  as indicated in the margin. For a more detailed description of any of the interface ports and jacks see *“Interface (Ports & Jacks)” on page A - 1*.

Warning Boxes

No matter what your level please pay careful attention to the warning and safety information indicated by the  symbol. Also please note the safety and handling instructions as indicated in the *Preface*.

Not Included

Operating Systems (e.g. *Windows 8.1*) and applications (e.g. word processing, spreadsheet and database programs) have their own manuals, so please consult the appropriate manuals.



Drivers

If you are installing new system software, or are re-configuring your computer for a different system, you will need to install the drivers listed in ***“Drivers & Utilities” on page 4 - 1***. Drivers are programs which act as an interface between the computer and a hardware component e.g. a wireless network module. It is very important that you install the drivers in the order listed in ***Table 4 - 1, on page 4 - 4***. You will be unable to use most advanced controls until the necessary drivers and utilities are properly installed. If your system hasn't been properly configured (your service representative may have already done that for you), refer to ***“What to Install” on page 4 - 1*** for installation instructions.

Ports and Jacks

See ***“Computer Ports and Jacks” on page A - 2*** for a description of the interface (ports & jacks) which allow your computer to communicate with external devices, connect to the internet etc.

System Software

Your computer may already come with system software pre-installed. Where this is not the case, or where you are re-configuring your computer for a different system, you will find the **Windows 8.1** operating system is supported.

Note: In order to run **Windows** without limitations or decreased performance, your computer requires a minimum **1GB** of system memory (RAM).



Windows Versions

Note that the information included on the following pages is for **Windows 8.1 only**.

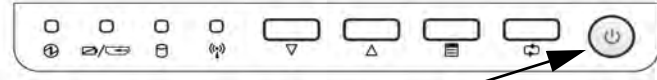
The **Windows 8** interface is slightly different in appearance and in methods of navigation, and a separate manual is provided on the *Device Drivers & Manual Disc* with reference to **Windows 8**.

Windows OS

In order to run **Windows 8/8.1 (32 Bit)** without limitations or decreased performance, your computer requires a minimum **1GB** of system memory (RAM), however if you are running **Windows 8/8.1 (64 bit)** your computer requires a minimum **2GB** of system memory (RAM).

System Startup

1. Remove all packing materials, CDs/DVDs and floppy disks etc.
2. Securely attach any peripherals you want to use with the computer to their ports (e.g keyboard and mouse etc.)
3. Attach the AC/DC adapter to the DC-In jack at the rear of the LCD, then plug the AC power cord into an outlet, and connect the AC power cord to the AC/DC adapter.
4. Push the power button at the front of the computer (along the bottom of the LCD) to turn the computer “on”.



Power Button (located along the bottom of the LCD)



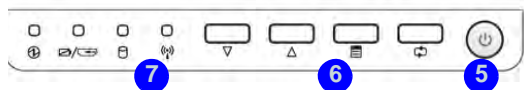
Shutdown

Note that you should always shut your computer down by choosing the **Shut Down** command in **Windows** (see page [1 - 38](#)). This will help prevent hard disk or system problems.

Figure 1 - 1 - AC/DC Adapter Plugged-In/Power Button

System Map: Front View - Model A

1. Optional Built-In PC Camera
2. PC Camera LED
3. Built-In Microphone
4. LCD
5. Power Button
6. Function Buttons
7. Power & System Activity LED Indicators
8. Speakers



Multi Touch Screen

Note that **Model B** computers incorporate a touch screen, **Model A** computers do not.

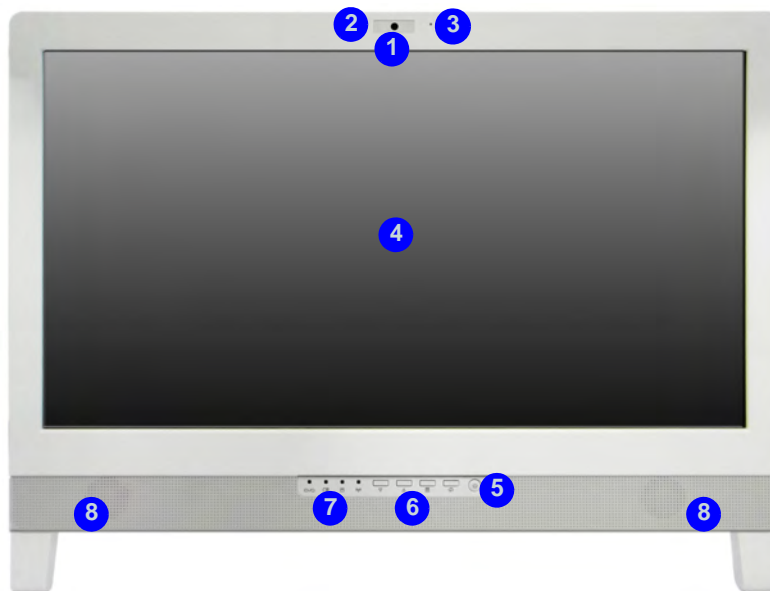
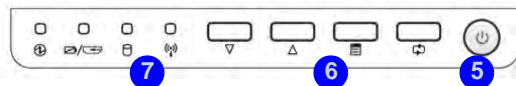


Figure 1 - 2 - Front View - Model A

System Map: Front View - Model B

1. Optional Built-In PC Camera
2. PC Camera LED
3. Built-In Microphone
4. **LCD with Multi Touch Screen**
5. Power Button
6. Function Buttons
7. Power & System Activity LED Indicators
8. Speakers



Multi Touch Screen

Note that **Model B** computers incorporate a touch screen, **Model A** computers do not.

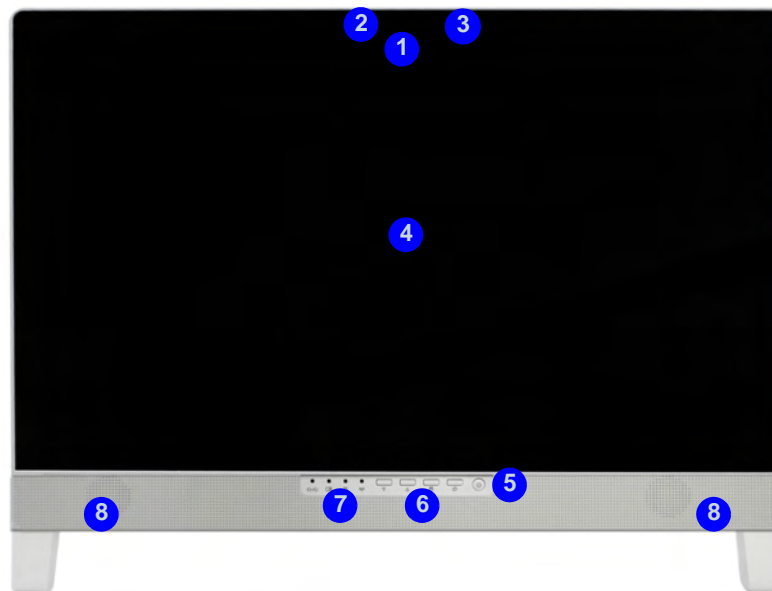


Figure 1 - 3 - Front View - Model B

Tilting the LCD Screen

It is possible to tilt the LCD screen in order to get the best possible viewing angle of the screen without glare etc.

1. Place one hand at the top of the computer **1**, and use the other to open the stand **2** to **an angle of around 15 degrees from the vertical position** (the stand will allow you to adjust to the appropriate angle if you pull it out and let it spring back).

Adjust the stand to tilt the computer to 15° from the vertical position.



Figure 1 - 4 - Adjust the Stand

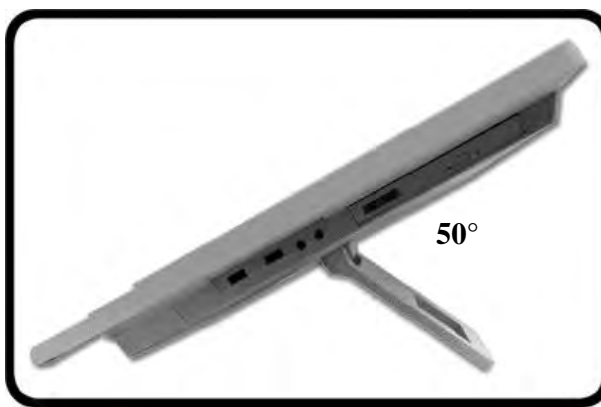


Moving the Computer

We strongly recommend using both hands to move the computer. You can use one hand to grip the computer by the stand, and the other to hold the top of the LCD screen.

It is recommended that you carry the computer with the LCD facing your body to avoid scratching the surface against other objects. However take care not to scratch the LCD with any personal items, belt fittings or jewelry etc. (one hand gripping the stand and the other gripping the top of the computer to avoid accidentally dropping it).

2. Apply pressure with one hand at the top (at point **3**) of the computer (while holding on to the side with the other hand) to carefully push the LCD screen down in order to tilt it to the appropriate viewing angle (**up to 50 degrees from the vertical position**).
3. Use one hand at the top of the computer (while holding on to the side with the other hand) to move the computer back to the original position.



Apply pressure from the top of the screen to adjust the stand outwards (up to 50° from the vertical position).



DVD Operation

Note that although the computer may be tilted up to an angle of 50 degrees from the vertical position, the DVD-ROM drive will only work (i.e. continue to spin and read DVDs) up until an angle of around 35 degrees from the vertical position.

If you have any problems with the system reading DVDs, adjust the tilt angle accordingly.

Figure 1 - 5 - LCD Screen Tilt

Buttons & LED Indicators

The buttons located under the front panel icons allow you to make screen and input adjustments.

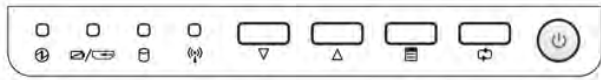


Figure 1 - 6 - Front Icons

Icon	Description
	Decrease/Increase Buttons - Use these buttons to decrease/increase the brightness
	Menu Toggle - Use this button to bring up the on screen menu when HDMI devices are plugged in When no HDMI devices are plugged in this button acts as an Airplane Mode switch Airplane mode on Airplane mode off
	Mode Toggle - Use this button to toggle between the computer and HDMI Input modes (see “Mode Toggle” on page 1 - 12)

Table 1 - 1 - Function Buttons

The LED indicators on the computer display helpful information about the current status of the computer.

Icon	Color	Description
	Orange	AC/DC Power is Plugged In
	Green	The Computer is On
	Blinking Green	The Computer is in Sleep Mode
	Orange	The Battery is Charging
	Blinking Orange	The Battery has Reached Critically Low Power Status
	Blank	The Battery is Fully Charged
	Green	HDMI Cable Plugged-In (if the computer is off - see page 1 - 12)
	Green	System Activity
	Green	Airplane Mode is ON (the WLAN & Bluetooth Modules are OFF)

Table 1 - 2 - LED Indicators

System Map: Left View



HDMI-In Port

Note that the HDMI-In Port supports video and audio signals from attached HDMI devices.

Multi-in-1 Card Reader

The card reader allows you to use the most popular digital storage card formats:

MMC (MultiMedia Card) / RSMMC
SD (Secure Digital) / Mini SD / SDHC / SDXC
Compatible
MS (Memory Stick) / MS Pro / MS Duo

USB 3.0 Port

The USB 3.0 port is denoted by its blue color; USB 2.0 ports are colored black.

ExpressCard Slot

The ExpressCard Slot accepts either **ExpressCard/34** or **ExpressCard/54** formats.

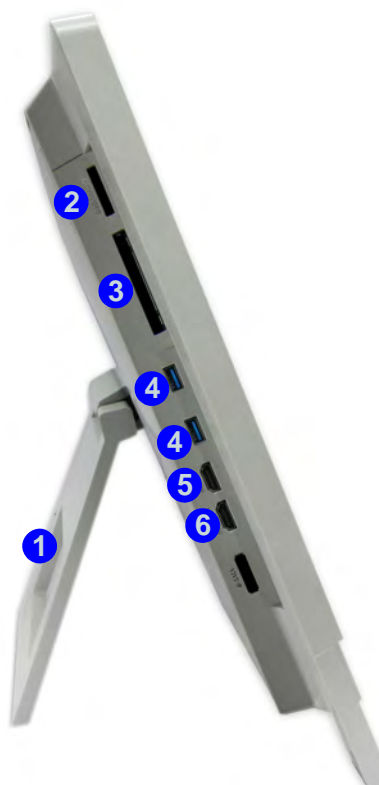


Figure 1 - 7
Left View

1. Stand
2. Multi-in-1 Card Reader
3. ExpressCard Slot (see page [2 - 7](#))
4. 2 * USB 3.0 Ports
5. HDMI-in Port
6. HDMI-Out Port



ExpressCard Slot


The ExpressCard Slot accepts either **ExpressCard/34** or **ExpressCard/54** formats.



HDMI-In Port

This computer features an **HDMI** (High-Definition Multimedia Interface) **input port** that allows you to display external sources such as Blu-ray players, DVDs, set top boxes and games consoles etc. on your computer screen.

The computer itself does not need to be powered on to display video and audio from external HDMI input sources. As long as the computer is plugged-in to a power source using the AC/DC adapter (**the HDMI-In port will not function under battery power**), simply plug-in the HDMI cable from the external device to the computer's HDMI-In port and the computer will act as the display device.

Mode Toggle

Press and hold the mode toggle button  to switch between the computer and HDMI input modes. When the HDMI input source is displayed you can use any HDMI device plugged in to the computer's HDMI-In port. **A quick press of the button will toggle the display on/off.**

When the HDMI cable is plugged-in, **and the computer is powered off**, the battery/HDMI icon  will be green when you press and hold the mode toggle button . When the HDMI device is playing the icon will then return to indicate the battery charge status. See [Table 1 - 3, on page 1 - 14](#) for details.

Menu Button




Press and hold the menu button  when an HDMI device is connected (when no HDMI device is connected the button as as an Airplane Mode toggle) to the HDMI-In port to bring up the on screen menu. This menu allows you to adjust the **Luminance, Color, Volume, On Screen Display** and interface **Language**. Use the decrease/increase buttons   to move up and down the menus, use the menu button to select an item and use the decrease/increase buttons to make adjustments.



Figure 1 - 8 - Main Menu (If HDMI Device is Connected)



HDMI Cable Removal in Hibernate or Sleep Modes

Note that (as part of the power saving feature) if the computer is in **Sleep or Hibernate modes**, and the HDMI cable is removed from the HDMI-In port, any settings adjusted in the Main Menu will revert to the default settings when the HDMI cable is plugged-in again.

It is recommended that you shut the computer down by choosing the **Shut Down** (see page 1 - 38) command in **Windows** before removing the HDMI cable.

Quick Start Guide

The following table indicates the standard functions **when an HDMI cable is plugged in to the HDMI-In port** (and the computer is powered **on/off**). See overleaf for information if the computer is in Hibernate or Sleep modes.








Computer Power Status	Battery/HDMI Icon 	Mode Toggle Button (Press & Hold) 	Mode Toggle Button (Quick Press) 
The computer is powered on (using the AC/DC adapter)	Indicates battery charge status only	Toggles between computer display and HDMI input	Toggles the display on/off
The computer is powered off (but is plugged in to the AC/DC adapter)	Green (when HDMI cable is plugged-in and the Mode Toggle Button has been pressed and held to select HDMI input) When the HDMI source is playing the icon will indicate battery charge status only	Toggles between computer display and HDMI input	Toggles the display on/off

Table 1 - 3 - Mode Toggle Functions when HDMI Cable is Plugged-In (Computer Off/On)

Note that if no HDMI cable is plugged-in to the HDMI-In port, and the system is off, or in Hibernate mode, then only the power button will function.

HDMI-In Port in Sleep or Hibernate Modes

Note that if the computer is in Sleep or Hibernate modes, and no HDMI cable is plugged-in, then the procedure for plugging-in the HDMI cable and using the system as a display device is as follows:

1. The System is in **Sleep** or **Hibernate** mode and no HDMI cable is plugged-in.
2. The battery/HDMI icon  will be off.
3. Plug-in the HDMI cable.
4. The battery/HDMI icon  will turn green for about 8 seconds and then turn off again.
5. Press the Mode Toggle Button .
6. The battery/HDMI icon  will turn green again.
7. After a few seconds the system will display the image from the external HDMI source.

System Map: Right View

Figure 1 - 9 - Right View

1. Optical Device Drive Bay
(for CD/DVD Device - see
page 2 - 3)
2. Headphone-Out Jack
3. Microphone-In Jack
4. USB 2.0 Port
5. Stand



CD/DVD Emergency Eject

If you need to manually eject a CD/DVD (e.g. due to an unexpected power interruption) you may push the end of a straightened paper clip into the emergency eject hole. Do not use a sharpened pencil or similar object that may break and become lodged in the hole.



Changing DVD Regional Codes

Go to the **Control Panel** and double-click **Device Manager (Hardware and Sound)**, then click the + next to **DVD/CD-ROM drives**. Double-click on the DVD-ROM device to bring up the **Properties** dialog box, and select the **DVD Region** (tab) to bring up the control panel to allow you to adjust the regional code. You can select your module's region code 5 times (see "**DVD Region Note**" on page 2 - 5).



Media Warning

Don't try to remove the CD/DVD while the system is accessing it. This may cause the system to "crash".

System Map: Rear View



USB Port for Wireless Transceiver

Note that the USB port for the wireless transceiver is designed specifically for a USB dongle for an RF Keyboard & Mouse kit (**not supplied with this model**).

Do not use any other USB devices in this port.

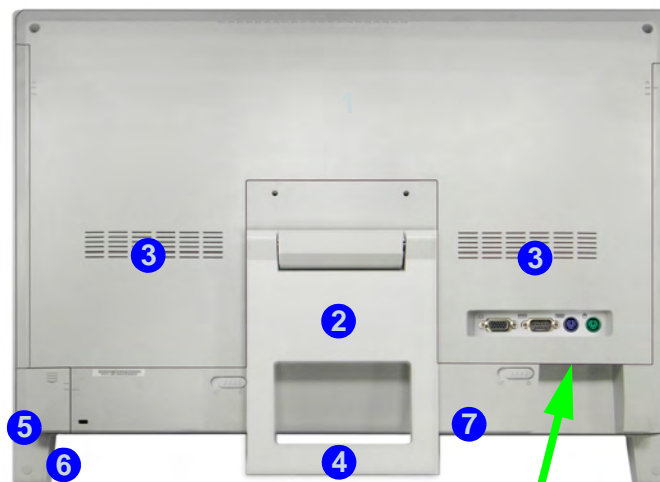


Figure 1 - 10
Rear View

1. Rear Component Cover
2. Stand
3. Vent/Fan Intake
4. Carrying Handle Area
5. USB Wireless Transceiver Cover (for an RF Keyboard & Mouse Kit USB Dongle - *not supplied with this model*)
6. Security Lock Slot
7. Battery
8. External Monitor Port
9. RS-232 Serial Port
10. PS/2 Port (keyboard)
11. PS/2 Port (mouse)
12. DC-In Jack
13. 2 * USB Ports
14. RJ-45 LAN Port



USB Port for Wireless Transceiver

Note that the USB port for the wireless transceiver is designed specifically for a USB dongle for an RF Keyboard & Mouse kit (**not supplied with this model**).

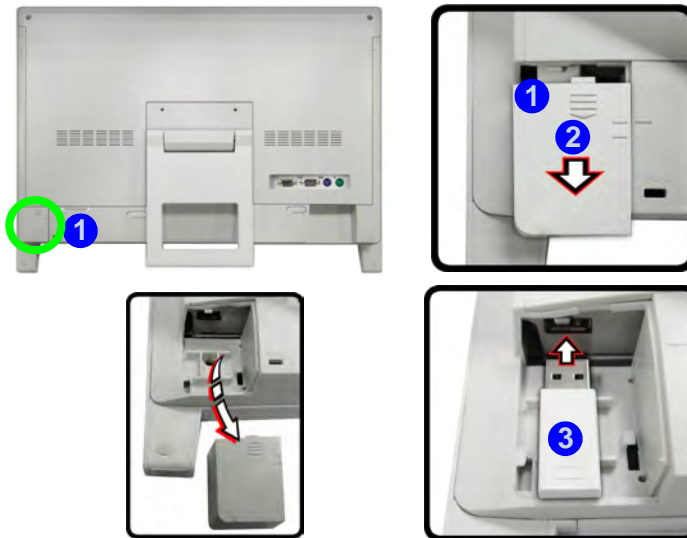
Do not use any other USB devices in this port.

Figure 1 - 11
**USB Port for
Wireless Keyboard
& Mouse Kit**

Wireless Keyboard & Mouse USB Transceiver

If you have purchased a wireless keyboard & mouse kit (**not supplied with this computer**) you can use the USB port located at the bottom left of the rear cover to house the USB transceiver dongle (do not use this port for any other device, see sidebar).

1. Remove the USB transceiver port cover **1** by sliding it in the direction of arrow **2**.
2. Insert the USB transceiver **3** into the USB port.
3. Replace the cover.



Windows Touch Screen Controls/Gestures

Model B computers incorporate a Touch Screen and this can be used to navigate through the interface in much the same way as a mouse, touchpad and keyboard. Where you see the instruction to click/double-click an item in this manual, you can choose to tap/double tap the appropriate area of the screen instead. The following gestures are useful when navigating the *Windows* interface.

- **Swipe from the right (Access the Charms Bar)** - Pull your finger from the right side of the screen (in the black area) to the left a little bit to bring up the **Charms Bar**.

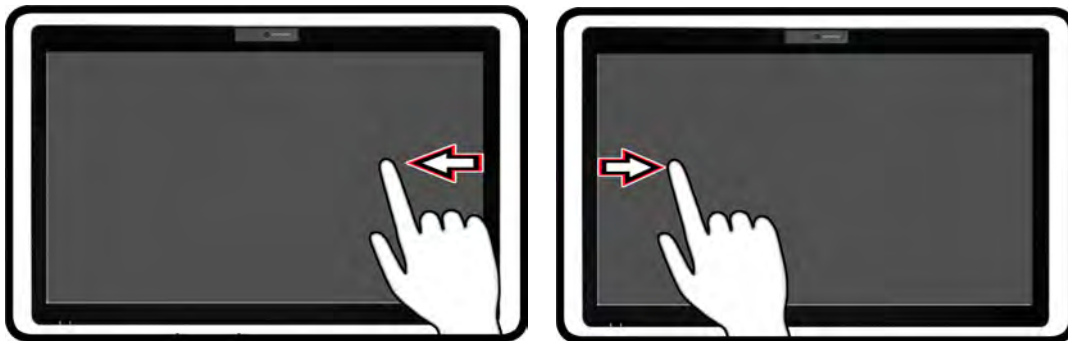


Figure 1 - 12 - Swipe from Right & Left

- **Swipe from the left (Switch apps)** - If multiple apps are running you can slide your finger from the left side of the screen (in the black area) to the right to switch between apps.
- **Swipe slowly from the left (Snap apps)** - Perform the same action above more slowly, to drag one app out and display it side-by-side with the app that was already on your screen.

Quick Start Guide

- **Swipe from left and back (Display running apps)** - Slide your finger from the left and quickly drag it back towards the right to display a list of apps that are currently running. Tap any app to switch to it.
- **Pull down from the top (Close app)** - Close any running app by starting at the top area of the screen and quickly pulling your finger about halfway down the screen.
- **Swipe down/up (Customize menu)** - Swiping the finger a little bit down from the top, or up from the bottom of the **Start screen** will bring up the menu with the **Customize** icon. Tap the **Customize** icon and then select the app tiles, and slide them to any selected position to rearrange them.

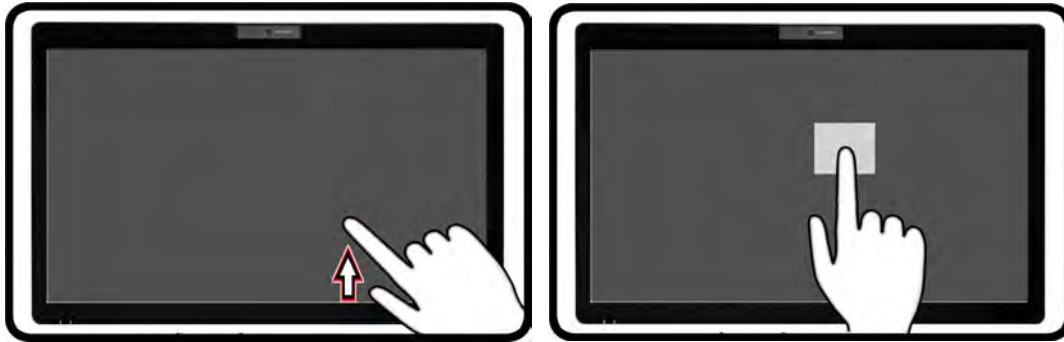







Figure 1 - 13 - Swipe Up and Tap, Hold & Release (Desktop Right-Click)

- **Swipe down on an item (Select/right-click)** - Swipe down on any tile in the Start screen to select it and bring up additional options.
- **Tap, Hold & Release (Desktop right-click)** - Tap the **Desktop**, hold until a square icon appears, and then release to access the right click menu.

Touch Keyboard

If you need to type on screen then the Touch Keyboard will pop up when required (e.g. when you need to type in an internet URL address in Internet Explorer). When the Touch Keyboard is displayed you have several display/input options and these can be accessed from the icon     at the bottom right of the keyboard. To access the Touch Keyboard from the Desktop app click/tap the keyboard icon in the taskbar .

Touch Keyboard Desktop app taskbar icon



Select Keyboard or Writing Pad Input

Figure 1 - 14 - Touch Keyboard

Quick Start Guide

The Touch Keyboard allows you to input text without the use of an actual keyboard., and you can use writing pad to write (continuously or one character at a time) or touch keyboard to input text. Use the **Help** menu for further information.



Click Help

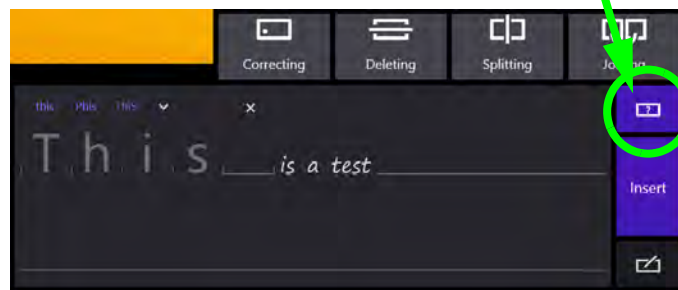
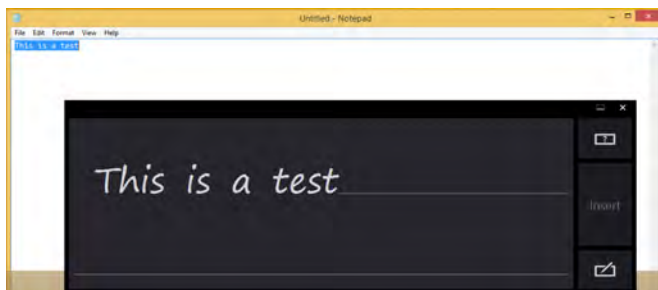



Figure 1 - 15 - Touch Keyboard, Writing Pad Input & Help


Keyboard Shortcuts - Windows 8.1

If you are using a keyboard with this system then note the function of the **Windows Logo Key & Menu/Application Key** (in the **Start** screen). The following keyboard shortcuts are useful for navigation/operation in *Windows*.

Windows Logo  Key +	Description
Tap Winkey	Toggle between the Start screen and the foremost running app or the Windows Desktop
C	Display Charms menu
D	Switch to the Windows Desktop and toggle show Desktop
E	Switch to the Windows desktop and launch Windows Explorer with Computer displayed
F	Display file Search
I	Open the Settings charm
K	Open the Connect charm
L	Lock the computer and display the Lock screen
P	Display the Second Screen menu
R	Switch to the Windows Desktop and display the Run dialog box
Z	Access the Customize Bar



Windows Logo Keyboard Shortcut

Use the Windows logo key  + **D** key combination to switch between the Start screen and Windows Desktop.

Menu/Application Keyboard Shortcut


When the Desktop app is running you can use the Menu/Application key  on the keyboard to display the context menu as per a mouse right-click. In the Start screen this function is useful to quickly display the **All Apps** icon.

Table 1 - 4
Windows 8
Keyboard Shortcuts




Windows Versions

Note that the information included on the following pages is for **Windows 8.1 only**.

The **Windows 8** interface is slightly different in appearance and in methods of navigation, and a separate manual is provided on the *Device Drivers & Manual Disc* with reference to **Windows 8**.

Windows 8.1 Control Panel

Throughout this manual you will see an instruction to open the **Control Panel**. Right-click the lower left hot corner to bring up the context menu (or use the **Windows Logo Key**  + **X** key combination) and select **Control Panel** in both the **Desktop app** or **Start screen**.

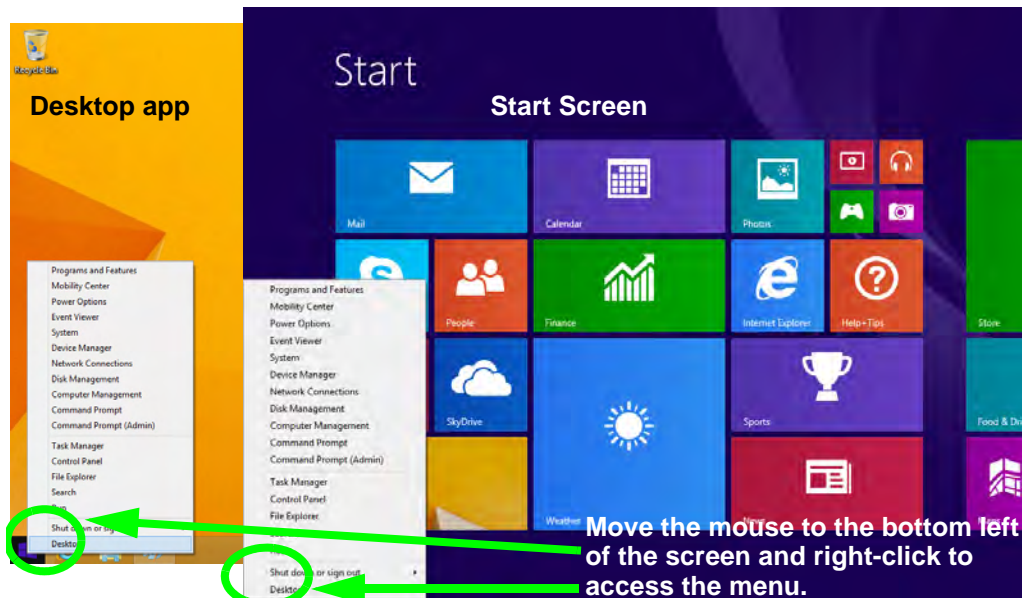


Figure 1 - 16 - Windows Context Menu

Right-click the Start button in the **Desktop** app (or use the **Windows Logo Key** + **X** key combination) to bring up an advanced context menu of useful features such as Control Panel, Programs and Features, Power Options, Task Manager, Search, File Explorer, Command Prompt, Device Manager and Network Connections etc.

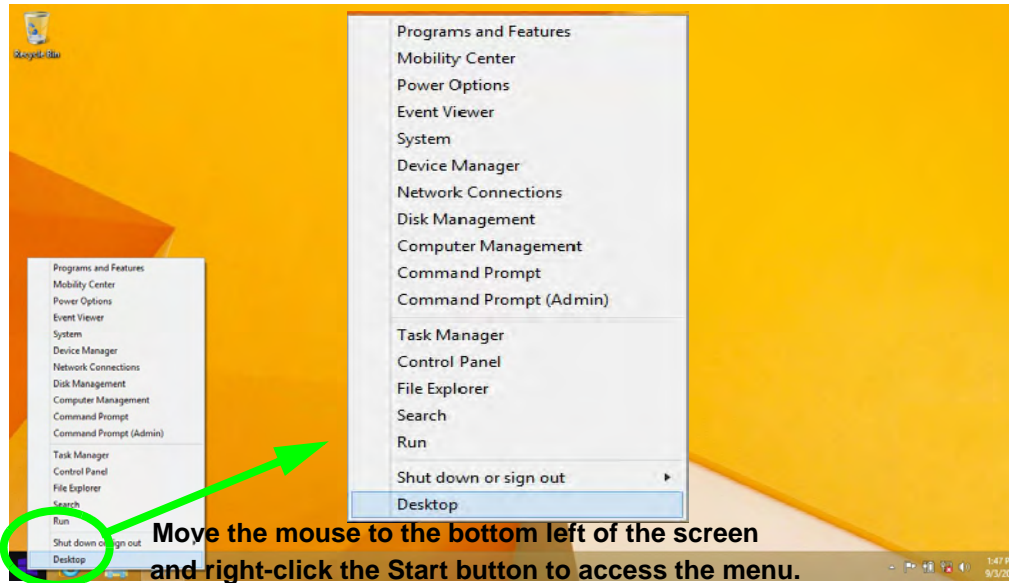


Figure 1 - 17 - Advanced Context Menu (Right-Click Start Button)




Display Most Recently Used Apps

If you are in the **Start** screen, **Desktop** or an app you can move your mouse to the upper left corner of the screen to get back to the most recently used app.

To view all the most recently used Apps hover over the top left of the screen and then move the mouse down along the left side of the screen to display the list.

Windows 8.1 Start Screen & Desktop

The Apps, control panels, utilities and programs within **Windows** are accessed from the **Start screen** and/or **Windows Desktop app**. The **Desktop** (which runs as an app within the **Start** screen) can be accessed by clicking the **Desktop** item in the **Start** screen (or by using the **Windows Logo Key**  + **D** key combination). Click the arrow at the bottom of the **Start** screen to access **Apps**.

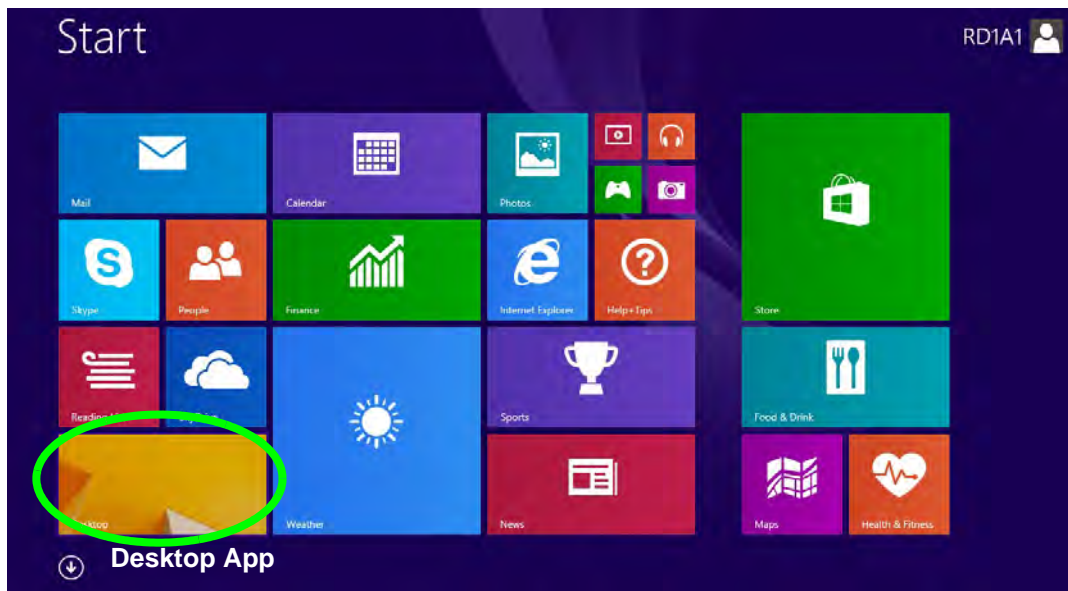


Figure 1 - 18 - Windows Start Screen

Apps & Tiles

The **Start** screen will contain a number of apps, and many more will be installed as you add more applications etc. Not all of these apps can fit on one screen so you will often need use the **slider** at the bottom of the screen in order to view all the necessary Apps.

Accessing Pining/Unpinning All Apps

You can add and remove the tiles for apps and control panels in the Start screen. **Right-click on a blank area of the Start screen**, and you will see the **Customize** icon. Click the **Customize** icon to display all the installed applications etc. Right-click any icon to bring up the menu at the bottom of the screen and you can then click the appropriate icon to **pin the App** to (or unpin from) the **Start** screen, or to the **taskbar** in the **Desktop application** (you can also open the app in a new window, run as administrator or open the file location).

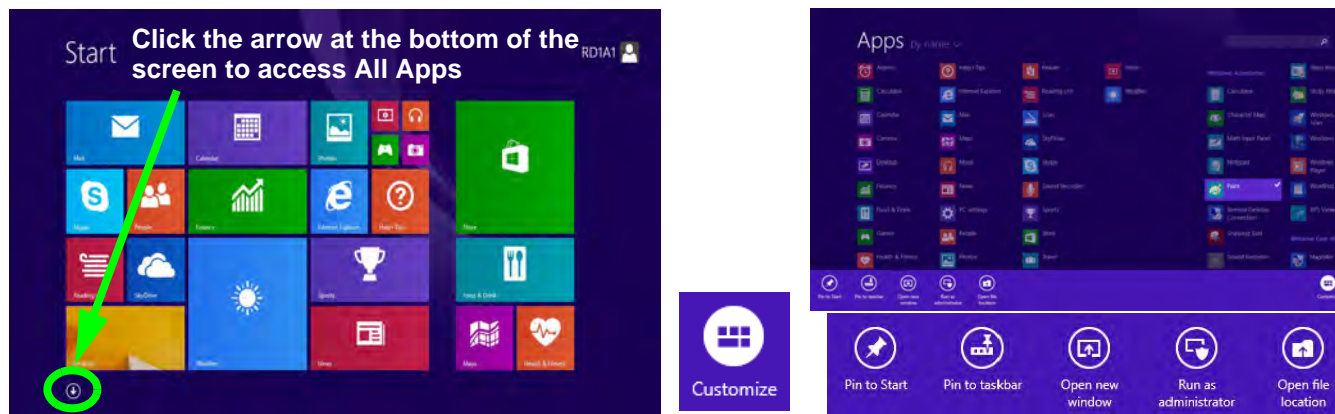



Figure 1 - 19 - Customize Apps

Quick Start Guide

Desktop Application

When the **Desktop** app is running (click the app in the **Start** screen or use the **Windows Logo Key**  + **D** key combination) you can use lower left hot corner to switch between the **Start** screen and the **Windows Desktop** app. To do so move your mouse to hover over the bottom left corner of the **Desktop** app and left-click.

When you move to the lower left hot corner in the **Start** screen it will take you back to your most recently used app (if one is running).

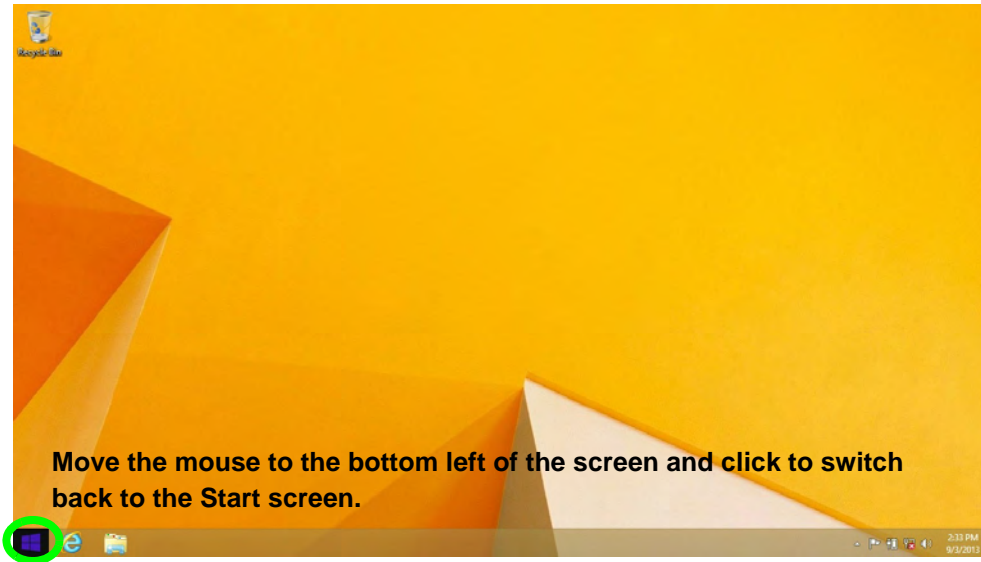


Figure 1 - 20 - Desktop

The Charms Bar







The right side of the screen displays the **Charms Bar**. The **Charms Bar** contains the **Search**, **Share**, **Start**, **De-**
vices and **Settings** menus. To access up the **Charms Bar** move the cursor to the upper or lower right corners of the screen, and then hover over one of the items in the **Charms Bar** to activate it (the bar will be black when it is active), or use the **Windows Logo Key**  + **C** key combination.

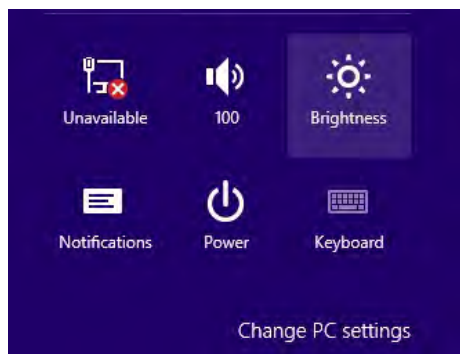


Figure 1 - 21 - Start Screen with Charms Bar

Quick Start Guide

Charms Bar Items

- **Search** : You can search for any file, application, Apps and control panel settings with instantaneous results.
- **Share** : This button is used to share information with people via mail or social networks.
- **Start** : Click to bring up the **Start** screen (the same function as pressing the Windows Logo Key or clicking the bottom left of the screen).
- **Devices** : Click this button to change connected peripheral device settings e.g. an external display.
- **Settings** : This button gives instant access to the computer settings, such as Network, Audio, Notifications, Power and Keyboard (click **Change PC Settings** to activate the PC Settings menu).



Charms Bar - TouchPad Access

To quick access the **Charms Bar** using the TouchPad:

1. Place your finger **off** the TouchPad (slightly to the right of the pad resting on the computer).
2. Move your finger across to the left on to the TouchPad.
3. The Charms Bar will then pop-up.

Figure 1 - 22 - Settings Menu

Windows 8.1 Control Panel

In many instances throughout this manual you will see an instruction to open the **Control Panel**. The Control Panel can be accessed in a number of ways in *Windows 8.1*.

- Click **Search** in the **Windows Charms Bar** (see previous page) and the search pane will pop out. Type *Control Panel* and select it from the results to the left.

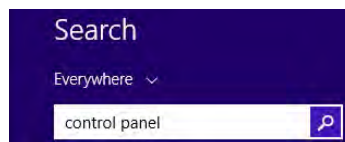


Figure 1 - 23 - Search (Control Panel)

- Click on **This PC** (in Apps, or you can to pin **This PC** to the **Start** screen), click on **Computer** in the top menu and select **Open Control Panel** from the ribbon.

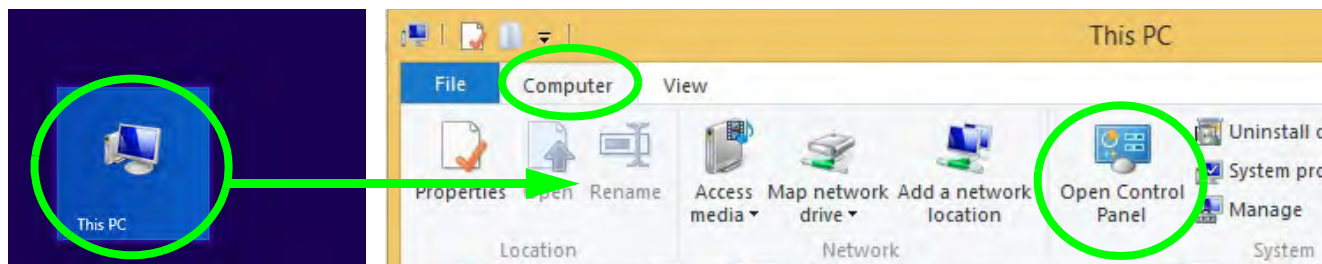


Figure 1 - 24 - Open Control Panel (Computer)

Quick Start Guide

- When in the **Desktop** app (this does not apply to the Start screen) click on **Settings** in the **Windows Charms Bar** and select **Control Panel** from the menu.

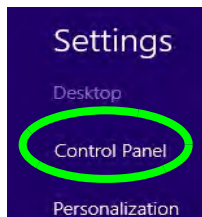


Figure 1 - 25 - Settings Charms Bar (Desktop App Only)

- Click the arrow at the bottom of the Start screen and click **Control Panel** in **Apps** (Windows System).

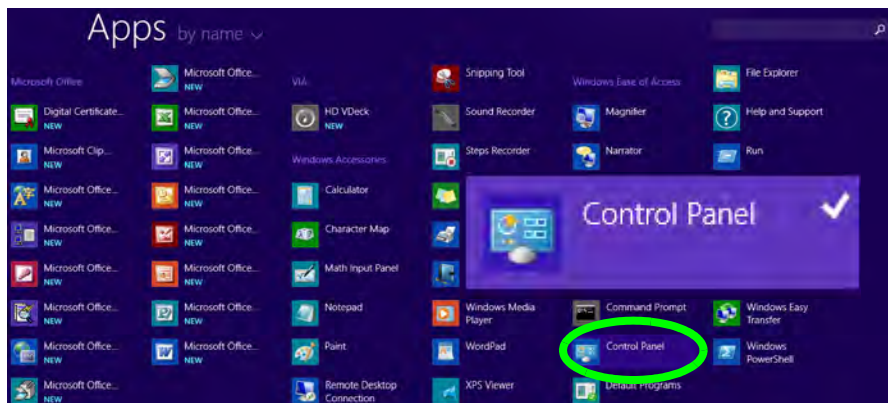




Figure 1 - 26 - All Apps - Control Panel

- Right-click the lower left hot corner to bring up the menu and select Control Panel (see *Figure 1 - 17 on page 1 - 25*).



Keyboard Shortcut to Control Panel

You can also use keyboard shortcuts to access the Control Panel. Press the **Windows logo key**  and **X** to bring up the context menu, and then press **P** to bring up the Control Panel. Alternatively press the **Windows logo key**  and **R** to bring up the **Run** dialog box, and then type "**Control Panel**" and press Enter to access the Control Panel.

Windows 8.1 Taskbar

In many instances throughout this manual you will see an instruction to access the **notification area of the taskbar (system tray)**. In *Windows 8.1* the taskbar is accessed from the **Desktop** application; if you are in the **Start** screen you will need to switch to the Desktop.

The taskbar is displayed at the bottom of the **Desktop** screen, and you can see the **notification area (system tray)** of the taskbar in the bottom right of the screen. Some of the control panels and applications referred to during the course of this manual can be accessed from here.



Figure 1 - 27 - Desktop Taskbar & Notification Area (System Tray)

You can pin/unpin apps to/from the taskbar in much the same way as you can to the **Start** screen (see *[“Accessing Pining/Unpinning All Apps” on page 1 - 27](#)*).

Video Features

You can switch display devices, and configure display options, from the **Display** control panel (in **Appearances and Personalization**) in *Windows* when running the **Desktop** app (see *“Desktop Application” on page 1 - 28* and *Appendix C*). It is also possible to quickly configure external displays from the **Devices** menu item in the **Charms Bar** (see *“The Charms Bar” on page 1 - 29*).

To Configure Displays from Devices (Charms Bar):

1. Attach your display to the appropriate port, and turn it on.
2. Go the **Charms Bar**, select **Devices**.
3. Click **Project** (you may need to click **Second Screen**).
4. Click on any one of the options from the menu to select **PC screen only**, **Duplicate**, **Extend** or **Second screen only**.

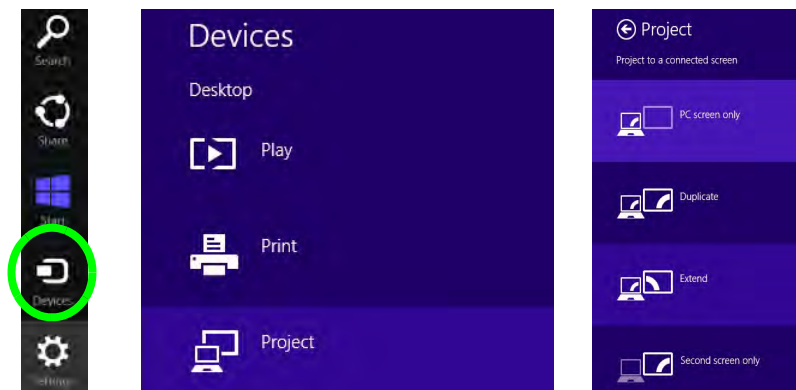
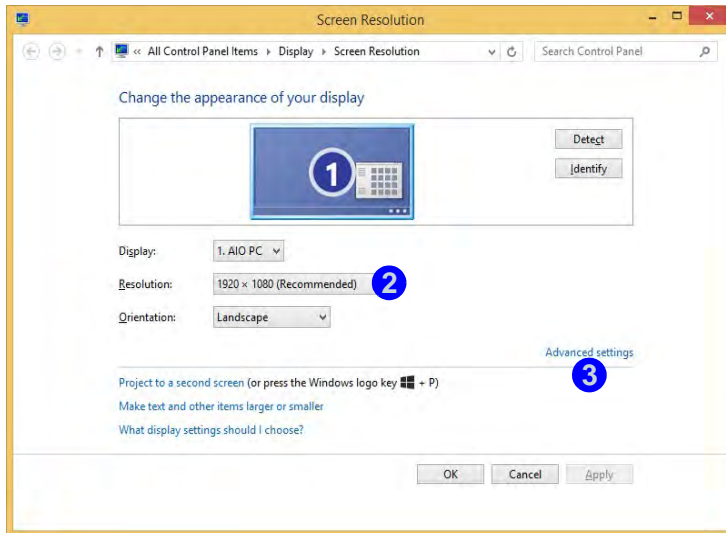


Figure 1 - 28- Devices (Project)

Quick Start Guide

To access **Display (Control Panel)** and **Screen Resolution** in *Windows*:

1. Go to the **Control Panel**.
2. Click/tap **Display** (icon) - In the **Appearance and Personalization** category.
3. **Adjust resolution.**



Right-Click Desktop App

1. You can right-click (tap and the touch screen until you see a square icon and then release your finger) the desktop and select **Screen resolution** ① (*Figure 1 - 29*).
2. Use the dropdown to select the screen **Resolution** ② (*Figure 1 - 29*).
3. Click **Advanced settings** ③ (*Figure 1 - 29*) to bring up the **Advanced** properties tabs.

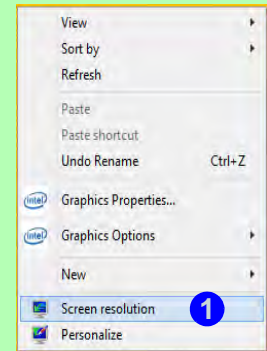



Figure 1 - 29 - Screen Resolution

To access the **Intel(R) HD Graphics Control Panel**:

1. Click/tap **Advanced settings** ③ (*Figure 1 - 29 on page 1 - 36*) in the **Screen Resolution** control panel in **Windows**.
 2. Click/tap the **Intel(R)...** tab and click/tap **Graphics Properties** (button) ④ (*Figure 1 - 30 on page 1 - 37*) .
- OR**
3. Right-click (tap, hold and release) the desktop and select **Graphics Properties** from the menu.
- OR**
4. Click/tap the icon  in the notification area of the Desktop taskbar and select **Graphics Properties** from the menu.

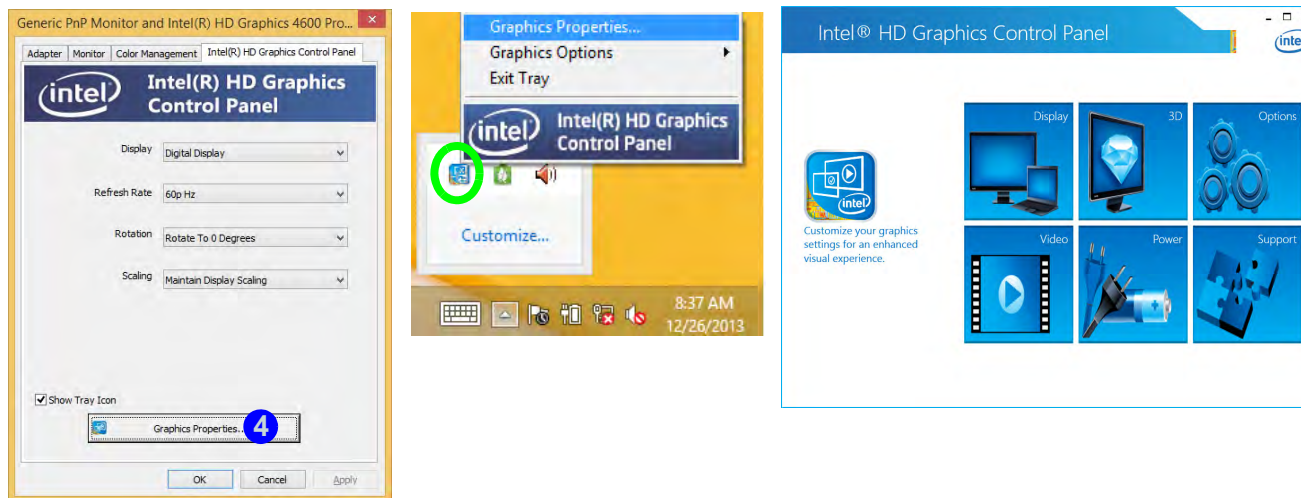


Figure 1 - 30 - Intel Graphics Control Panel

Power Options

Power Options (Hardware and Sound) can be accessed from the Control Panel. The **Power Menu** item in **Settings** in the **Charms Bar** in *Windows 8.1* may be used to **Shut down** or **Restart** (you can also add **Hibernate/Sleep** to the menu - see *“Adding Hibernate/Sleep to the Power Menu” on page 3 - 9*). You can also use the context menu (**Shut down or sign out**) shut the computer down/restart etc.

Shut Down, Restart or Sleep (Charms Bar)

1. Go to the **Charms Bar** and click **Settings**.
2. Click **Power** .
3. Select **Sleep**, **Shut Down** or **Restart**.

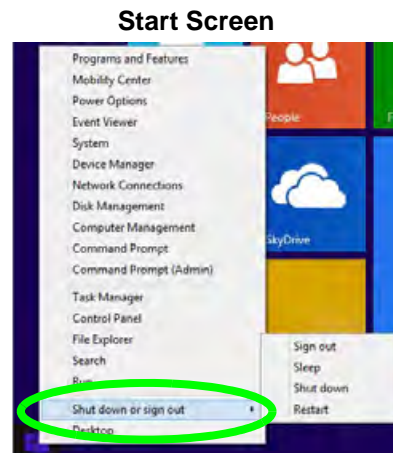
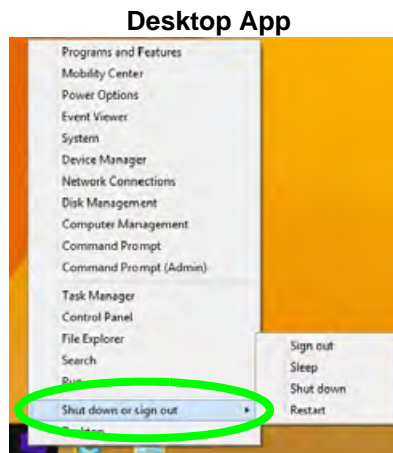


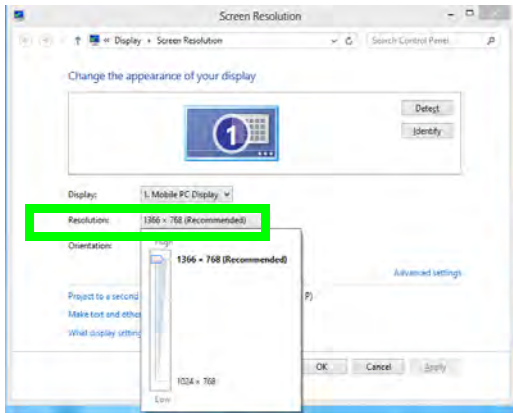
Figure 1 - 31 - Shut Down/Restart

Running Apps

To run apps in **Windows** you will need to check that the **Screen Resolution** and **User Account Control Settings** are compatible with the system requirements.

Screen Resolution Settings

1. Switch to the Windows Desktop (click/tap the app or use the Windows logo key **⊞** + **D** key combination).
2. Right-click a blank area of the Windows Desktop and select **Screen Resolution**. Adjust the **Resolution** to make sure that it is at least **1024 * 768**, although preferably **1366 * 768** or above (see sidebar).



Screen Resolution for Apps (Windows 8.1)

The minimum resolution in which Apps will run is **1024x768**.

The minimum resolution required to support all the features of Windows 8 (including multitasking with snap) is **1366x768**.

These specs are the minimum screen resolution that supports all the features of Windows on a useful physical size.

Figure 1 - 32 - Screen Resolution

Quick Start Guide

User Account Control Settings

If your computer meets the minimum screen resolution requirements, and still you can't run Metro apps, then that you have to check the status of **User Account Control (UAC)**. Metro apps may fail to open when the UAC is turned off. To check whether the UAC is on or off, follow the instructions below.

1. Open the **Control Panel**.
2. Click on **User Accounts** and then click on **Change User Account Control settings** (or click **System and Security** and click **Change User Account Control Settings** under **Action Center**).
3. If the slider is in the **Never notify** position, then the UAC is disabled.
4. To enable or turn on the UAC, move the slider to **Always notify** or **Notify me when apps try to make changes to my computer (default)** position, and then click **OK**.

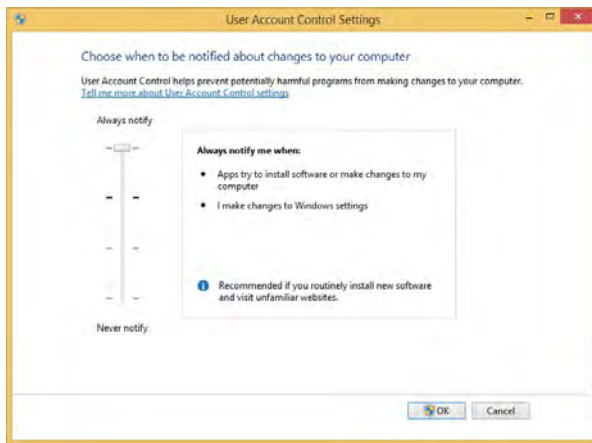


Figure 1 - 33 - User Account Control

Chapter 2: Features & Components

Overview

Read this chapter to learn more about the following main features and components of the computer:

- Hard Disk Drive
- Optical (CD/DVD) Device
- Multi-in-1 Card Reader
- ExpressCard Slot
- Audio Features



Power Safety

Before attempting to access any of the internal components of your computer please ensure that the machine is not connected to the AC power, and that the machine is turned off. Also ensure that all peripheral cables, including phone lines, are disconnected from the computer.

Hard Disk Drive

The hard disk drive is used to store your data in the computer. The hard disk can be taken out to accommodate other 2.5" or 3.5" (pictured below) serial (SATA) hard disk drives with a height of 9.5 mm.

The hard disk is accessible from the rear of your computer as seen below. For further details see *[“Upgrading the Hard Disk Drive/SSD” on page 6 - 9.](#)*

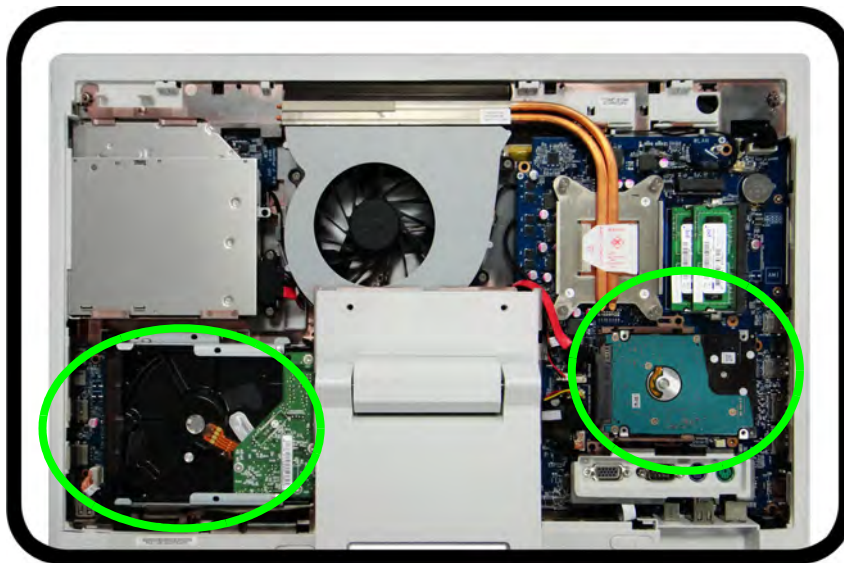


Figure 2 - 1

Hard Disk Location

Optical (CD/DVD) Device

There is a bay for a 5.25" optical (CD/DVD) device (12.7mm height). The actual device will depend on the module you purchased (see *[“Storage” on page C - 3](#)*). The optical device is usually labeled **“Drive D:”** and may be used as a boot device if properly set in the **BIOS** (see *[“Boot Menu” on page 5 - 11](#)*).

Loading Discs

To insert a CD/DVD, press the open button ❶ and carefully place a CD/DVD onto the disc tray with label-side facing up (use just enough force for the disc to click onto the tray’s spindle). Gently push the CD/DVD tray in until its lock “clicks” and you are ready to start. The busy indicator ❷ will light up while data is being accessed, or while an audio/video CD, or DVD, is playing. If power is unexpectedly interrupted, insert an object such as a straightened paper clip into the emergency eject hole ❸ to open the tray.



Volume Adjustment

The sound volume level can be set using the volume control in the **Settings** menu in the **Charms Bar** (see *[“Audio Features” on page 2 - 8](#)*).

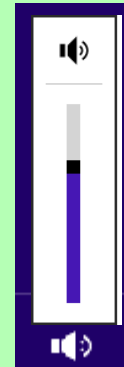


Figure 2 - 2
Optical Device



CD Emergency Eject

If you need to manually eject a CD (e.g. due to an unexpected power interruption) you may push the end of a straightened paper clip into the emergency eject hole. However please do NOT use a sharpened pencil or similar object that may break and become lodged in the hole.

Disk Eject Warning

Don't try to remove a CD/DVD while the system is accessing it. This may cause the system to "crash".

Handling CDs or DVDs

Proper handling of your CDs/DVDs will prevent them from being damaged. Please follow the advice below to make sure that the data stored on your CDs/DVDs can be accessed.

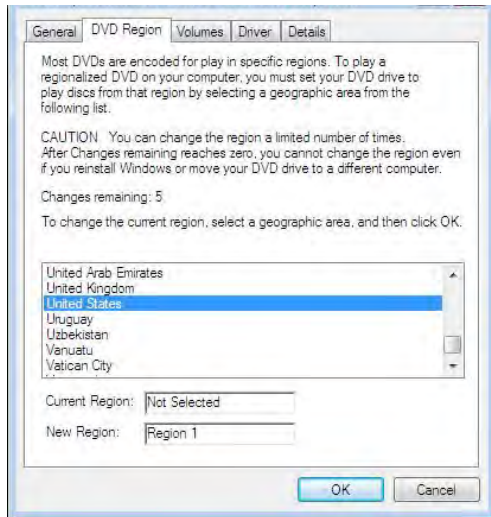
Note the following:

- Hold the CD or DVD by the edges; do not touch the surface of the disc.
- Use a clean, soft, dry cloth to remove dust or fingerprints.
- Do not write on the surface with a pen.
- Do not attach paper or other materials to the surface of the disc.
- Do not store or place the CD or DVD in high-temperature areas.
- Do not use benzene, thinner, or other cleaners to clean the CD or DVD.
- Do not bend the CD or DVD.
- Do not drop or subject the CD or DVD to shock.

DVD Regional Codes

To change the DVD regional codes:

1. Go to the **Control Panel**
2. Double-click/tap **Device Manager (Hardware and Sound)**, then click/tap the + next to **DVD/CD-ROM drives**.
3. Double-click/tap on the DVD-ROM device to bring up the **Properties** dialog box, and select the **DVD Region** (tab) to bring up the control panel to allow you to adjust the regional code.



- **Region 1** - USA & Canada
- **Region 2** - Western Europe, Japan, South Africa, Middle East & Egypt
- **Region 3** - South-East Asia, Taiwan, South Korea, The Philippines, Indonesia, Hong Kong
- **Region 4** - South & Central America, Mexico, Australia, New Zealand
- **Region 5** - N Korea, Russia, Eastern Europe, India & Most of Africa
- **Region 6** - China



DVD Region Note

DVD region detection is device dependent, not OS-dependent. You can select your module's region code 5 times. The fifth selection is permanent. This cannot be altered even if you change your operating system or you use the module in another computer.

Figure 2 - 3
DVD Region Codes



Card Reader Cover

Make sure you keep the cover in the card reader when not in use. This will help prevent foreign objects and/or dust getting in to the card reader.

Figure 2 - 4
Front View

1. Card Reader

Multi-in-1 Card Reader

The card reader allows you to use some of the latest digital storage cards. Push the card into the slot and it will appear as a removable device, and can be accessed in the same way as your hard disk (s). Make sure you install the Card Reader driver (see *“ExpressCard/Card Reader” on page 4 - 7*).

- MMC (MultiMedia Card) / RSMMC
- SD (Secure Digital) / Mini SD / SDHC / SDXC
- MS (Memory Stick) / MS Pro / MS Duo



ExpressCard Slot

The computer is equipped with an **Express-Card/34/54** slot that reads Express Card/34 and ExpressCard/54 formats. ExpressCards are the successors to PCMCIA (PC Cards).

ExpressCard/54 is used for applications which require a larger interface slot, e.g. CompactFlash card reader. The number denotes the card width; 54mm for the Express Card/54 and 34mm for the ExpressCard/34. Make sure you install the Card Reader driver (see *[“ExpressCard/Card Reader”](#)* on page 4 - 7).

Inserting and Removing Express-Cards

- Align the ExpressCard with the slot and push it in until it locks into place.
- To remove an ExpressCard, simply press the card to eject it.



ExpressCard Slot Cover

Make sure you keep the cover in the ExpressCard slot when not in use. This will help prevent foreign objects and/or dust getting in to the ExpressCard Slot.

Figure 2 - 5
ExpressCard Slot

1. ExpressCard Slot



Volume Adjustment

The sound volume level can be set using the volume control in the **Settings** menu in the **Charms Bar**.

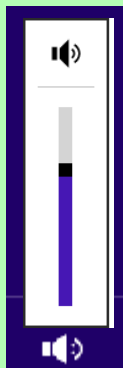






Figure 2 - 6
Realtek Audio
Manager

Audio Features

You can configure the audio options on your computer from the **Sound**  control panel in **Windows**, or from the **Realtek HD Audio Manager**  icon in the taskbar notification area/control panel (right-click the taskbar notification area icon  to bring up an audio menu). The volume may also be adjusted by means of the **volume icon in the taskbar** or the **audio slider in the Settings menu** (see sidebar).




Right-click the icon  to access the menu above.



Note that many keyboards have built-in controls to allow you to adjust the audio volume.

Setup for Audio Recording

To record audio sources on your computer at optimum quality follow the instructions below:

1. Go to the **Control Panel**.
2. Click/tap **Realtek HD Audio Manager (Hardware and Sound)**, or right-click the taskbar icon  and select **Sound Manager**.
3. Click/tap **Microphone Effects** (tab) in **Microphone** (tab), and then click/tap to select **Noise Suppression** (button), or adjust the **Recording Volume** level to around **60**, to obtain the optimum recording quality.
4. Click/tap **OK** to close the control panel and save the settings.

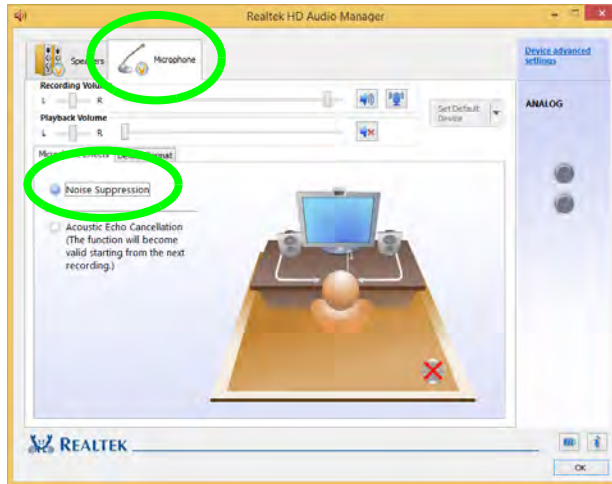


Figure 2 - 7
**Realtek Audio
Manager -
Recording Setup**

Chapter 3: Power Management

Overview

To conserve power, especially when using the battery, your computer power management conserves power by controlling individual components of the computer (the monitor and hard disk drive) or the whole system.

This chapter covers:

- The Power Sources
- Turning On the Computer
- Shutting the Computer Down
- Power-Saving States
- Configuring the Power Buttons
- Battery Information

The computer uses enhanced power saving techniques to give the operating system (OS) direct control over the power and thermal states of devices and processors. For example, this enables the OS to set devices into low-power states based on user settings and information from applications.

Using some form of power management greatly increases the life span of the LCD.



OS Note

Power management functions will vary slightly depending on your operating system. For more information it is best to refer to the user's manual of your operating system.

(**Note:** All pictures used on the following pages are from the **Windows 8.1 OS**.)

Power Options

Power management in **Windows** is configured from **Power Options (Hardware and Sound)**, which can be accessed from the **Control Panel** (see page **1 - 31**).

The Power Sources

The computer can be powered by either the AC/DC adapter or a battery pack.

AC/DC Adapter

Use only the AC/DC adapter that comes with your computer. The wrong type of AC/DC adapter will damage the computer and its components.

1. Attach the AC/DC adapter to the DC-In jack at the rear of the computer.
2. Plug the AC power cord into an outlet, and then connect the AC power cord to the AC/DC adapter.
3. Adjust the LCD to a comfortable viewing angle.
4. Press the power button on the front of the computer **for about 2 - 3 seconds** to turn the computer “on” (note that the power LED on the front of the computer will turn from orange to green when the computer powers on).

Battery

The battery allows you to use your computer while you are on the road or when an electrical outlet is unavailable. Battery life varies depending on the applications and the configuration you're using. **To increase battery life, let the battery discharge completely before recharging** (see *“How do I completely discharge the battery?” on page 3 - 17*).

We recommend that you do not remove the battery. For more information on the battery, please refer to *“Battery Information” on page 3 - 13*.

Turning On the Computer

Now you are ready to begin using your computer. To turn it on simply press the power button on the front panel.

When the computer is on, you can use the power button as a Stand by/Hibernate/Shutdown hot-key button when it is pressed for less than **4 seconds** (pressing and holding the power button for longer than this will shut the computer down). Use **Power Options (Hardware and Sound)** in the *Windows* control panel to configure this feature.



Power Button as Stand by or Hibernate Button

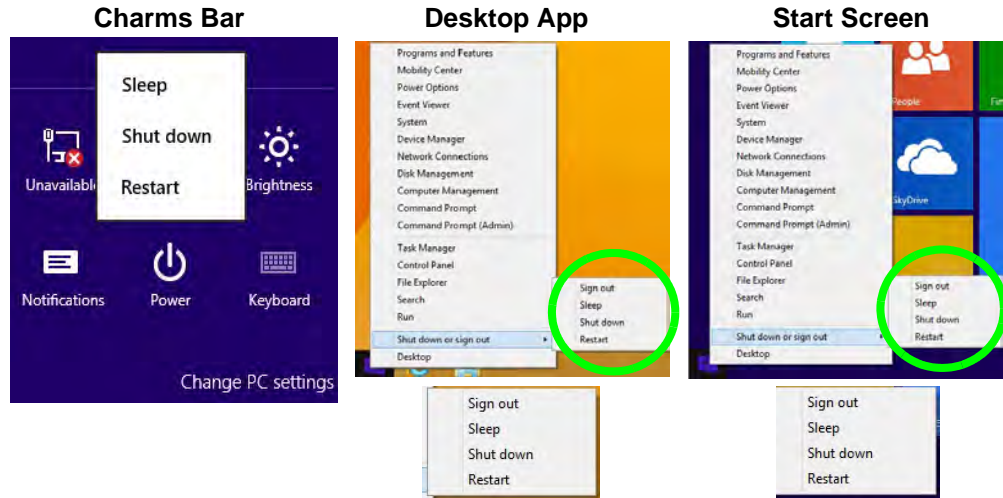
You can use the OS's "Power Options" control panel to set the power button to send the system into Stand by or Hibernate mode (see your OS's documentation, or ["Configuring the Power Buttons" on page 3 - 9](#) for details).

Shutting the Computer Down

Note that you should always shut your computer down by choosing the **Shut down** command as this will help prevent hard disk or system problems. Use the **Shut down or sign out** item in the **Context Menu** (right-click the lower left corner of the screen to bring up the menu).

You can also use the **Power Menu** in **Settings** in the **Windows 8.1 Charms Bar**. If you want to add Hibernate/Sleep to the Power Menu see [“” on page 3 - 9](#).

Figure 3 - 1
Shut Down/Restart

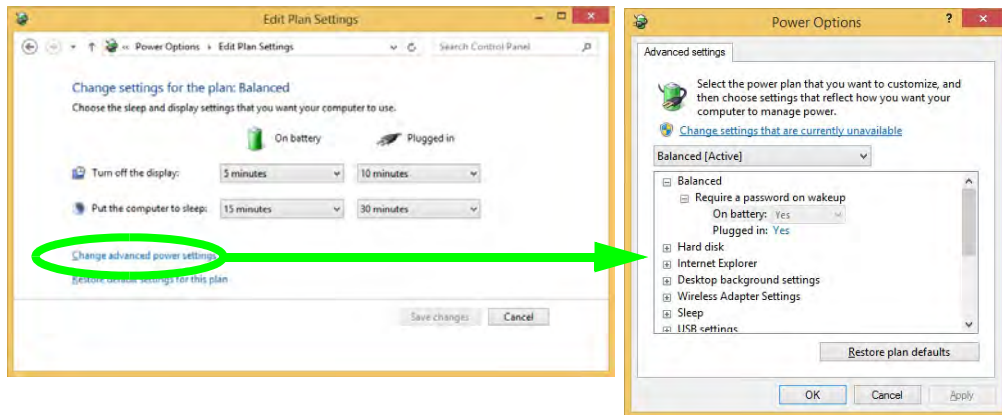


Power Plans

The computer can be configured to conserve power by means of **power plans**. You can use (or modify) an existing **power plan**, or create a new one.

The settings may be adjusted to set the **display** to turn off after a specified time, and to send the computer into **Sleep** after a period of inactivity.

Click/tap **Change plan settings** and then click/tap **Change advanced power settings** to access further configuration options in **Advanced Settings**.



Resuming Operation

See **Table 3 - 1, on page 3 - 11** for information on how to resume from a power-saving state.

Password

It is recommended that you enable a password on system resume in order to protect your data.

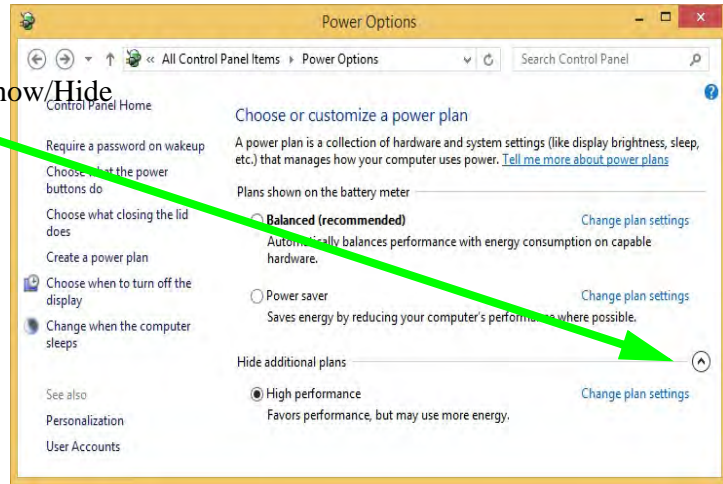
Figure 3 - 2
**Power Plan
Advanced Settings**

Each **Windows power plan** will also adjust the processor performance of your machine in order to save power. This is worth bearing in mind if you are experiencing any reduced performance (especially under DC/battery power).

Choose **High performance** (you may need to click/tap **Show additional plans** to view the High performance plan) for maximum performance when the computer is powered from an AC power source. Choose the **Power saver** (bear in mind that this scheme may slow down the overall performance of the computer in order to save power) for maximum power saving when the computer is battery (DC power) powered.

Figure 3 - 3
Power Plans

Click/tap to Show/Hide
additional
power plans



Power-Saving States

You can use power-saving states to stop the computer's operation and restart where you left off. *Win 8.1* uses the **Sleep**, **Hibernate** and **Shut Down** power-saving states.

Sleep

In **Sleep** all of your work, settings and preferences are saved to memory before the system sleeps. When you are not using your computer for a certain length of time, which you specify in the operating system, it will enter **Sleep** to save power.

The PC wakes from **Sleep within seconds** and will return you to where you last left off (what was on your desktop) without reopening the application(s) and file(s) you last used.

If your mobile PC in **Sleep** is running on battery power the system will use only a minimum amount of power. After an extended period the system will save all the information to the hard disk and shut the computer down before the battery becomes depleted.

To add **Sleep** to the **Power Menu** see *“Adding Hibernate/Sleep to the Power Menu” on page 3 - 10.*



Wake On LAN Support

Wake-On-LAN is only supported from **Sleep** or **Hibernate** states in *Windows*.

If you require your computer to wake up from network activity in *Windows* then make sure that the computer is either in **Sleep** or **Hibernate**.

Wake-On-LAN is not supported from **Shut-down** states in *Windows*.

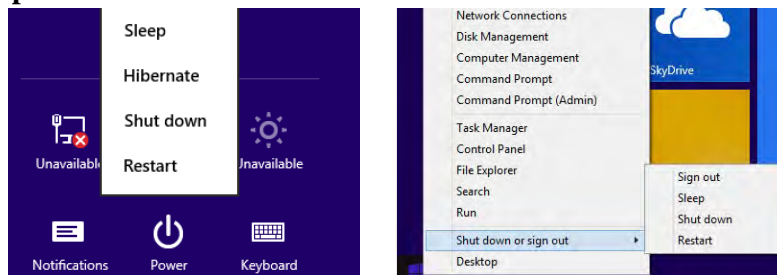
Hibernate

Hibernate uses the least amount of power of all the power-saving states and saves all of your information on a part of the hard disk before it turns the system off. If a power failure occurs the system can restore your work from the hard disk; if a power failure occurs when work is saved only to memory, then the work will be lost. **Hibernate** will also return you to where you last left off within seconds. You should put your mobile PC into **Hibernate** if you will not use the computer for a period of time, and will not have the chance to charge the battery. To add **Hibernate** to the **Power Menu** see *“” on page 3 - 9.*


Shut down

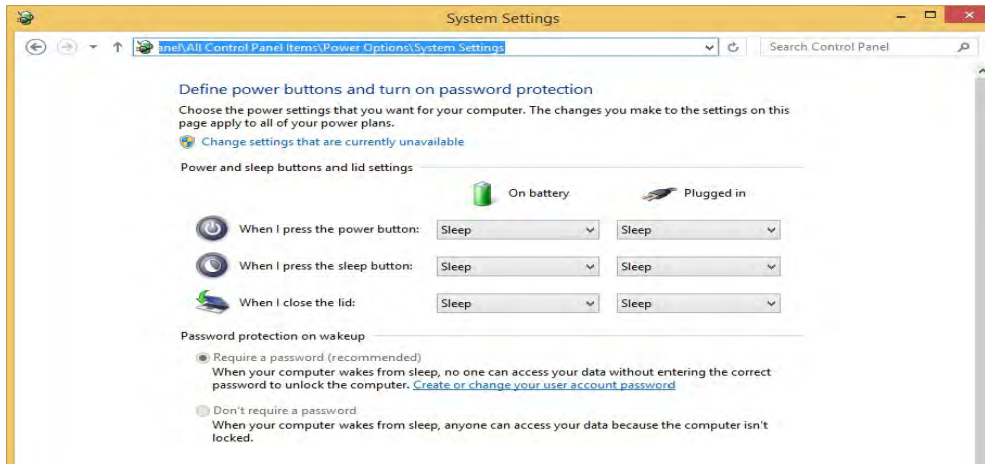
You should **Shut down** the computer if you plan to install new hardware (don't forget to remove the battery and follow all the safety instructions in **Chapter 6**), plan to be away from the computer for several days, or you do not need it to wake up and run a scheduled task. Returning to full operation from **Shut down** takes longer than from **Sleep** or **Hibernate**.

Figure 3 - 4
Power Menu



Configuring the Power Buttons

The power button may be set to send the computer in to either **Sleep** or **Hibernate**. In **Sleep**, the LED  will blink green. In **Hibernate** the LED will be orange. If only the display is turned off, the LED will remain green. Click/tap **Choose what the power buttons do** on the left menu in **Power Options** to bring up the menu.



Password Protection

It is recommended that you enable a password on wake up in order to protect your data.

However you can disable this setting from the **Power Options** menu by clicking **Require a password on wakeup** in the left menu, and selecting the options (click/tap **Change settings that are currently unavailable**).

Figure 3 - 5
Power Options
Define Power
Buttons

Adding Hibernate/Sleep to the Power Menu

Add **Hibernate/Sleep** to the **Power Menu** as follows.

1. Go to the **Power Options (Hardware and Sound)** control panel (see page [1 - 31](#)).
2. Click/tap **Choose what the power buttons do**.
3. Click/tap to put a tick in the **Hibernate/Sleep** box under **Shutdown settings**.
4. Click/tap **Save Changes** and close the control panel.

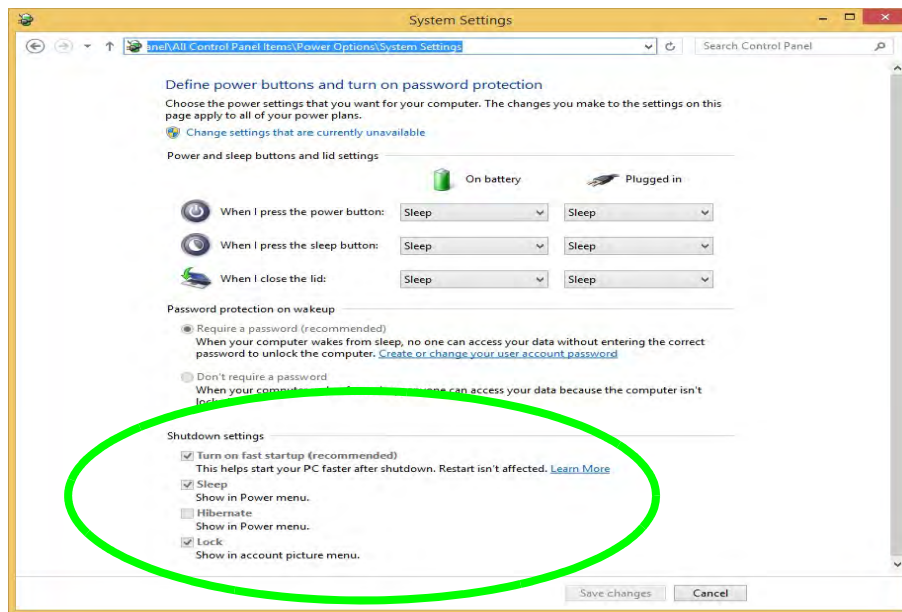


Figure 3 - 6
Power Options
Define Power
Buttons - Shutdown
Settings

Resuming Operation

You can resume operation from power-saving states by pressing the power button, or in some cases pressing the sleep button (see your keyboard documentation).



Power Status	Icon  Color	To Resume
Power Off	Off	Press the Power Button
Sleep	Blinking Green	Press the Power Button Press the Sleep Button (see your keyboard documentation)
Hibernate	Off (battery) Orange (AC/DC adapter)	Press the Power Button
Display Turned Off	Green	Press a Key or Move the Mouse
<div><p>Power Button</p><p>When the computer is on, you can use the power button as a Sleep/Hibernate/Shut Down hot key button when it is pressed for less than 4 seconds (pressing and holding the power button for longer than this will force the computer to shut down).</p></div>		

Table 3 - 1
Resuming
Operation

Ctrl + Alt + Delete Key Combination

You can use the **CTRL + ALT + DEL** key combination from almost any of the *Windows* interfaces/Apps to bring up a full-screen displaying **Lock**, **Switch User**, **Log off**, **Change a password** and **Task Manager** options. If you click/tap the **Power** icon in the lower right corner of the screen a power management option menu appears to display **Sleep**, **Shut down**, and **Restart**.

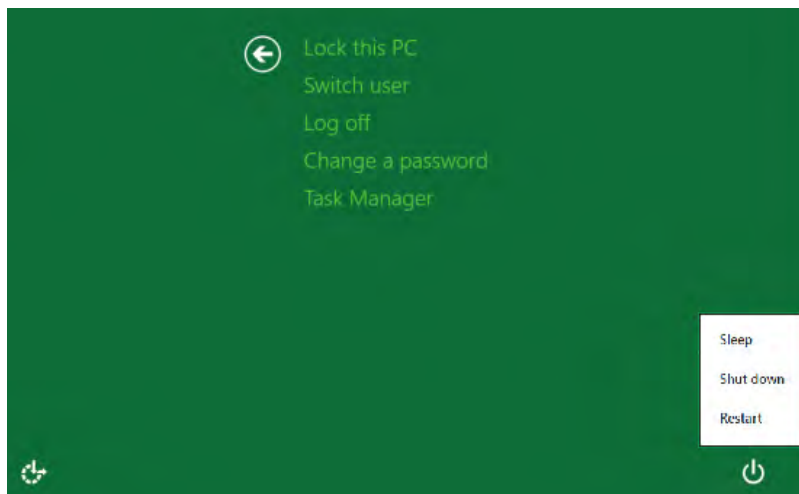


Figure 3 - 7
Ctrl + Alt + Delete
Menu

To fully control all the power options (including Hibernate mode) go to the **Power Options** control panel and configure the power button and sleep button to perform the function selected.

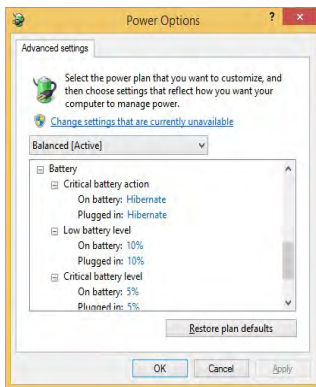
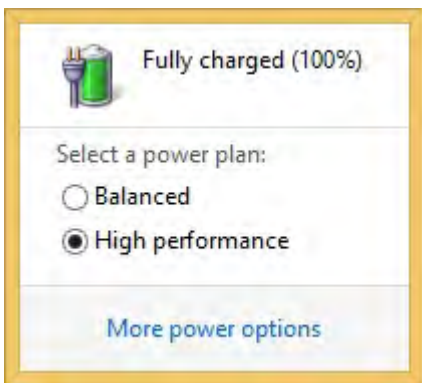
Battery Information


Follow these simple guidelines to get the best use out of your battery.

Battery Power

Your computer's battery power is dependent upon many factors, including the programs you are running, and peripheral devices attached. You can set actions to be taken (e.g. Shut down, Hibernate etc.), and set critical and low battery levels from power plan **Change plan settings > Change advanced power settings** (see *Figure 3 - 2 on page 3 - 5*).

Click/tap the battery icon  in the notification area to see the current battery level and charge status.





**Low Battery
Warning**

When the battery is critically low, immediately connect the AC/DC adapter to the computer or save your work, otherwise, the unsaved data will be lost when the power is depleted.

Figure 3 - 8
**Battery Icon
(Notification Area) &
Battery Advanced
Settings**



Windows Mobility Center

The **Windows Mobility Center** (**Hardware and Sound**) control panel provides an easy point of access for information on battery status, power plans used and wireless device status etc.

Conserving Battery Power

- Use a **power plan** that conserves power (e.g **Power saver**), however note that this may have an affect on computer performance.
- Lower the brightness level of the LCD display. The system will decrease LCD brightness slightly to save power when it is not powered by the AC/DC adapter.
- Reduce the amount of time before the display is turned off.
- Close wireless, Bluetooth, modem or communication applications when they are not being used (e.g. put the system in Airplane Mode).
- Disconnect/remove any unnecessary external devices e.g. USB devices.

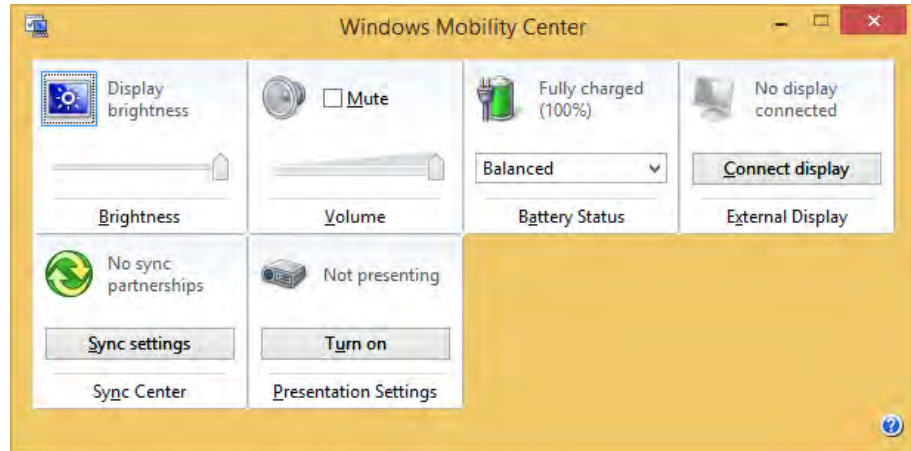


Figure 3 - 9
Windows Mobility Center

Battery Life

Battery life may be shortened through improper maintenance. **To optimize the life and improve its performance, fully discharge and recharge the battery at least once every 30 days.**

We recommend that you do not remove the battery yourself. If you do need to remove the battery for any reason (e.g. long term storage) see *“Removing the Battery” on page 6 - 3*.

New Battery

Always completely discharge, then fully charge, a new battery (see *“Battery FAQ” on page 3 - 17* for instructions on how to do this).

Recharging the Battery with the AC/DC Adapter

The battery pack automatically recharges when the AC/DC adapter is attached and plugged into an electrical outlet. If the computer is powered on, and in use, it will take several hours to fully recharge the battery. When the computer is turned off but plugged into an electrical outlet, battery charge time is less. (Refer to *“Buttons & LED Indicators” on page 1 - 10* for information on the battery charge status, and to *“Battery FAQ” on page 3 - 17* for more information on how to maintain and properly recharge the battery pack.)



Caution

Danger of explosion if battery is incorrectly replaced.

Replace only with the same or equivalent type recommended by the manufacturer. Discard used battery according to the manufacturer's instructions.

Proper handling of the Battery Pack

- DO NOT disassemble the battery pack under any circumstances.
- DO NOT expose the battery to fire or high temperatures, it may explode.
- DO NOT connect the metal terminals (+, -) to each other.



Damaged Battery Warning

Should you notice any physical defects (e.g. the battery is bent out of shape after being dropped), or any unusual smells emanating from the notebook battery, shut your computer down immediately and contact your distributor/supplier. If the battery has been dropped we do not recommend using it any further, as even if the computer continues to work with a damaged battery in place, it may cause circuit damage, which may possibly result in fire. It is recommended that you replace your computer battery every two years.

Battery FAQ

How do I completely discharge the battery?

Use the computer with battery power until it shuts down due to a low battery. Don't turn off the computer even if a message indicates the battery is critically low, just let the computer use up all of the battery power and shut down on its own.

1. Save and close all files and applications.
2. **Create a power plan** for discharging the battery and set all the options to **Never**.

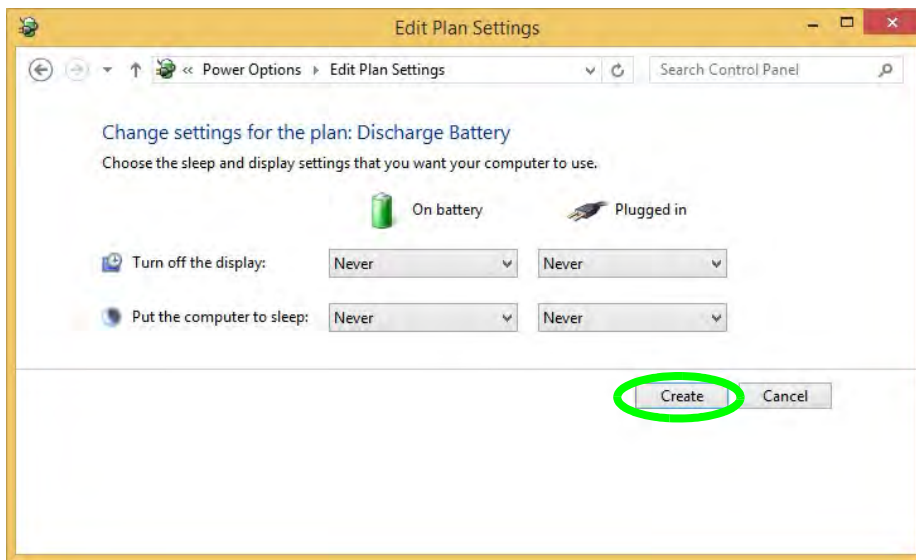


Figure 3 - 10
Power Plan Create

3. Click/tap **Change plan settings** (after creating it) and click/tap **Change plan settings > Change advanced power settings**.

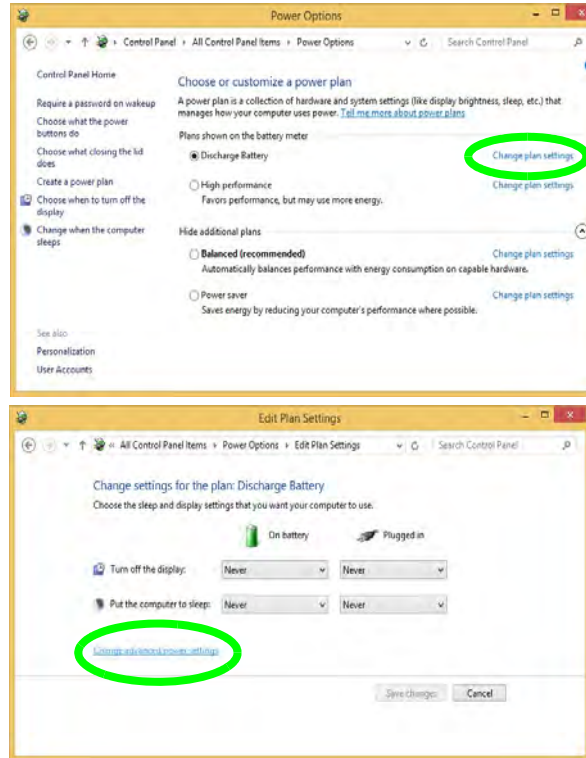


Figure 3 - 11
**Change Plan
Settings / Change
Advanced Power
Settings**

4. Scroll down to **Battery** and click/tap **+** to expand the battery options.
5. Choose the options below (click/tap **Yes** if a warning appears):

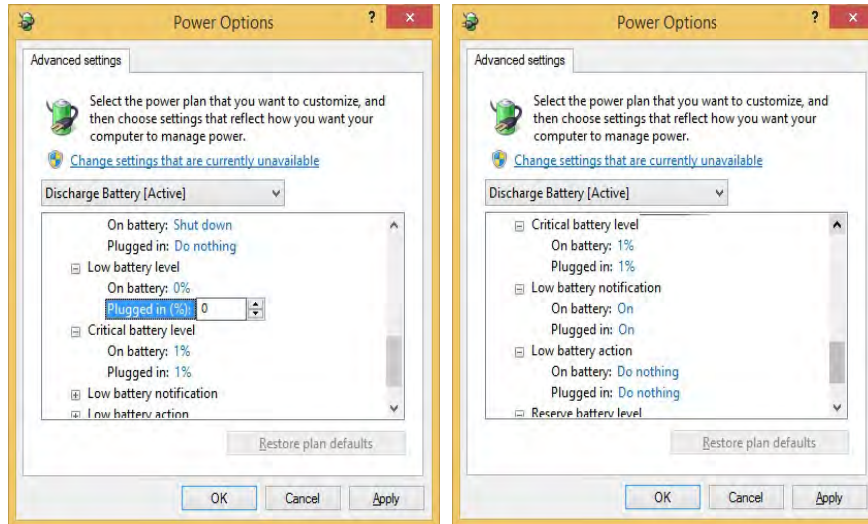


Figure 3 - 12
Power Options
Advanced Settings -
Battery

- Low battery levels = 0%
- Critical battery Levels = 1%
- Low battery action = Do Nothing
- Critical battery action (On battery) = Shut Down
- Critical battery action (Plugged in) = Do Nothing

How do I fully charge the battery?

When charging the battery, don't stop until the LED charging indicator light changes from orange to green.

How do I maintain the battery?

Completely discharge and charge the battery at least once every 30 days or after about 20 partial discharges.

Chapter 4: Drivers & Utilities

This chapter deals with installing the drivers and utilities essential to the operation or improvement of some of the computer's subsystems. The system takes advantage of some newer hardware components for which the latest versions of most available operating systems haven't built in drivers and utilities. Thus, some of the system components won't be auto-configured with an appropriate driver or utility during operating system installation. Instead, you need to manually install some system-required drivers and utilities.

What to Install

The *Device Drivers & Utilities + User's Manual* disc contains the drivers and utilities necessary for the proper operation of the computer. *Table 4 - 1, on page 4 - 4* lists what you need to install and **it is very important that the drivers are installed in the order indicated.**

Note that the information included on the following pages is for Windows 8.1 only.

The procedures for installing drivers for the **PC Camera, Wireless LAN and Bluetooth & WLAN Combo** modules are provided in *"Modules & Options" on page 7 - 1.*



Driver Installation & Power

When installing drivers make sure your computer is powered by the AC/DC adapter connected to a working power source. Some drivers draw a significant amount of power during the installation procedure, and if the remaining battery capacity is not adequate this may cause the system to shut down and cause system problems (note that there is no safety issue involved here, and the battery will be rechargeable within 1 minute).

Driver Installation (Windows 8.1)

1. Insert the *Device Drivers & Utilities + User's Manual* disc into the computer's DVD drive.
2. Click/tap the message "**Tap to choose what happens with this disc.**"
3. Click/tap **Run autorun.exe.**

4

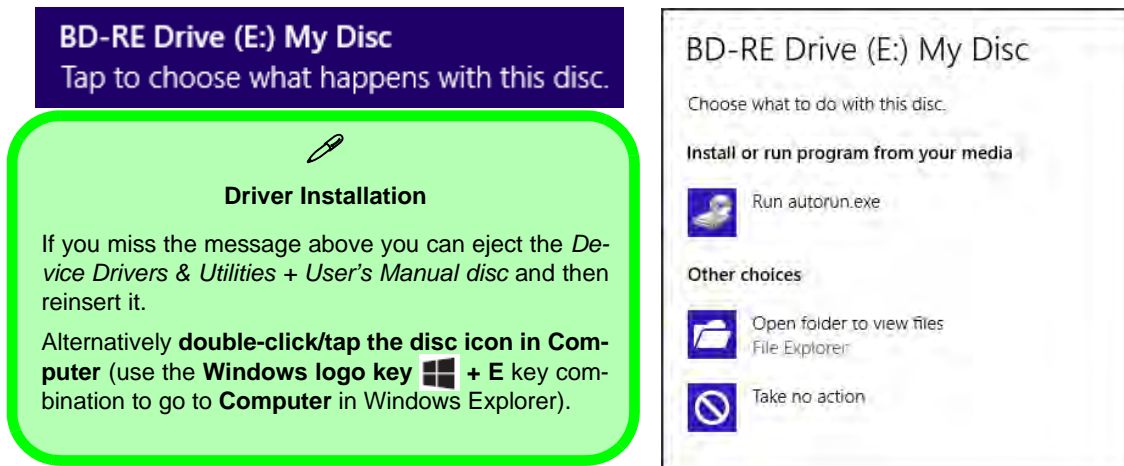


Figure 4 - 1 - Autorun Driver Installation Disc

4. Click/tap **Install Drivers** (button), or **Option Drivers** (button) to access the **Optional** driver menu.
5. Check the driver installation order from **Table 4 - 1, on page 4 - 4** (the drivers must be installed in this order) which is the same as that listed in the **Drivers Installer** menu below.
6. Click/tap to select the driver you wish to install, (you should note down the drivers as you install them).
7. Follow the instructions for each individual driver installation procedure as listed on the appropriate pages.

Follow the instructions to install the driver. Alternatively click/tap **Start**, navigate (**Browse..**) to the executable file and then follow the manual setup instructions. Note: If you need to reinstall any driver, you should uninstall the driver first.



Figure 4 - 2 - Drivers Installer Screens

See [Figure 4 - 3 on page 4 - 9](#) for the optional driver installer screen.

Windows 8.1 Driver	Page #	Windows 8.1 Driver - Optional	Page #
<i>Chipset</i>	<i>Page 4 - 7</i>	<i>PC Camera Module</i> (No driver required)	<i>Page 7 - 2</i>
<i>Video</i>	<i>Page 4 - 7</i>	<i>Wireless LAN Module</i>	<i>Page 7 - 11</i>
<i>LAN</i>	<i>Page 4 - 7</i>	<i>Bluetooth & WLAN Combo Module</i>	<i>Page 7 - 16</i>
<i>Card Reader</i>	<i>Page 4 - 7</i>	<i>Trusted Platform (Security) Module</i>	<i>Page 7 - 21</i>
<i>System Brightness AP</i>	<i>Page 4 - 7</i>	<i>Wireless Display</i> (No driver required)	<i>Page 7 - 35</i>
<i>Airplane</i>	<i>Page 4 - 7</i>		
<i>MEI Driver</i>	<i>Page 4 - 7</i>		
<i>Audio</i>	<i>Page 4 - 8</i>		

Table 4 - 1 - Driver Installation

Note that you need to install both the WLAN & Bluetooth drivers for the WLAN & Bluetooth Combo modules.

Manual Driver Installation

Click/tap **Browse CD/DVD** (button) in the *Drivers Installer* application and browse to the executable file in the appropriate driver folder.

Windows Update

After installing all the drivers make sure you enable **Windows Update** in order to get all the latest security updates etc. (all updates will include the latest **hotfixes** from Microsoft). See “*Windows Update*” on page 4 - 8 for instructions.

Updating/Reinstalling Individual Drivers

If you wish to update/reinstall individual drivers it may be necessary to uninstall the original driver. To do this go to the **Control Panel** in the *Windows OS* and double-click/tap the **Programs and Features** icon (**Programs > Uninstall a program**). Click/tap to select the driver (if it is not listed see below) and click/tap **Uninstall**, and then follow the on screen prompts (it may be necessary to restart the computer). Reinstall the driver as outlined in this chapter.

If the driver is not listed in the **Programs and Features** menu:

1. Go to the **Control Panel**.
2. Double-click/tap **Device Manager (Hardware and Sound > Devices and Printers > Device Manager)**.
3. Double-click/tap the **device** you wish to update/reinstall the driver for (you may need to click/tap “+” to expand the selection).
4. Click/tap **Driver** (tab) and click/tap the **Update Driver** or **Uninstall** button and follow the on screen prompts.

User Account Control

If a **User Account Control** prompt appears as part of the driver installation procedure, click/tap **Continue** or **Allow**, and follow the installation procedure as directed.

Windows Security Message

If you receive a *Windows* security message as part of the driver installation process. Just click/tap ***“Install this driver software anyway”*** or ***“Install”*** to continue the installation procedure.

You will receive this message in cases where the driver has been released after the version of *Windows* you are currently using. All the drivers provided will have already received certification for *Windows*.

New Hardware Found

If you see the message **“New Hardware Found”** during the installation procedure (**other than when outlined in the driver install procedure**), click/tap **Cancel** to close the window, and follow the installation procedure.



Driver Installation General Guidelines

The driver installation procedure outlined in this Chapter (and in **Chapter 7 Options & Modules**), are accurate at the time of going to press.

Drivers are always subject to upgrade and revision so the exact procedure for certain drivers may differ slightly. As a general guide follow the default on screen instructions for each driver (e.g. **Next > Next > Finish**) unless you are an advanced user. In many cases a restart is required to install the driver.

Make sure any modules (e.g. PC Camera, WLAN or Bluetooth) are **ON** before installing the appropriate driver.

Driver Installation Procedure

Insert the *Device Drivers & Utilities + User's Manual* disc (for **Windows 8.1**) into your DVD drive and click/tap **Install Drivers** (button).

Chipset

1. Click/tap **1.Install Chipset Driver > Yes.**
2. Click/tap **Next > Yes > Next > Next.**
3. Click/tap **Finish** to restart the computer.

Video

1. Click/tap **2.Install VGA Driver > Yes.**
2. Click/tap **Next > Yes > Next > Next.**
3. Click/tap **Finish** to restart the computer.

LAN

1. Click/tap **3.Install LAN Driver > Yes.**
2. Click/tap **Install Drivers and Software > Next.**
3. Click/tap the button to accept the license and click/tap **Next > Next > Install.**
4. Click/tap **Finish.**
5. The network settings can now be configured.

Card Reader

1. Click/tap **4.Install Cardreader Driver > Yes.**
2. Click/tap **Finish.**

System Brightness AP

1. Click/tap **5.System Brightness > Yes.**
2. Click/tap **Next > Next.**
3. Click/tap **Finish > Finish** to restart the computer.

Airplane

Note: Do not use Update Driver in Device Manager to install the Airplane Mode driver.

1. Click **6.Install AirplaneMode AP > Yes.**
2. Click **Next.**
3. Click **Finish** to restart the computer.

MEI Driver

1. Click/tap **7.Install MEI Driver > Yes.**
2. Click/tap **Next > Yes > Next.**
3. Click/tap **Finish** to restart the computer.

Audio

1. Click/tap **8.Install Audio Driver > Yes**.
2. Click/tap **Next**.
3. Click/tap **Finish** to restart the computer.

Note that after installing the audio driver the system will not return to the **Drivers Installer** screen. To install any of the optional drivers listed overleaf, eject the *Device Drivers & Utilities + User's Manual* disc and then reinsert it (or double-click/tap the disc icon in My Computer), and click/tap **Option Drivers** (button) to access the optional driver menu.



Windows Update

After installing all the drivers make sure you enable **Windows Update** in order to get all the latest security updates etc., (all updates will include the latest **hotfixes** from Microsoft).

To enable **Windows Update** make sure you are connected to the internet:

1. Go to the **Control Panel**.
2. Click/tap **Windows Update** (System and Security).
3. Click/tap **Check for updates** (button).
4. The computer will now check for updates (you need to be connected to the internet).
5. Click/tap **Install now** (button) to begin checking for the updates.
6. Click/tap **Install updates** (button) to install the updates.

Optional Drivers

See the pages indicated in *Table 4 - 1, on page 4 - 4* for the driver installation procedures for any modules included in your purchase option. Insert the *Device Drivers & Utilities + User's Manual* disc and click/tap **Option Drivers** (button) to access the optional driver menu.

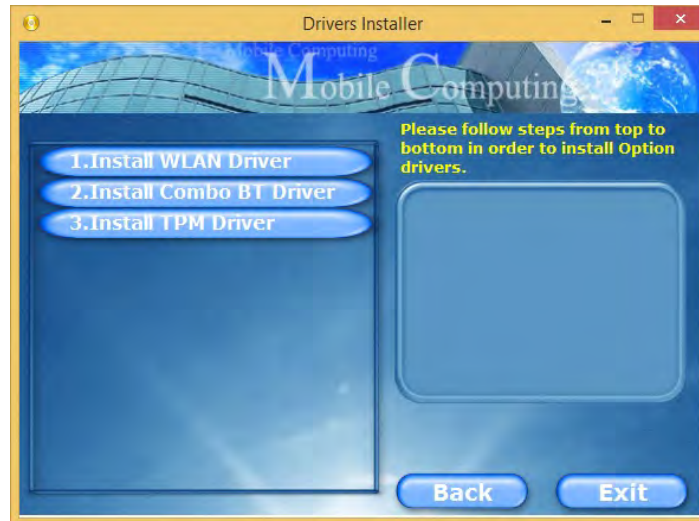


Figure 4 - 3 - Optional Drivers

Chapter 5: BIOS Utilities

Overview

This chapter gives a brief introduction to the computer's built-in software:

If your computer has never been set up, or you are making important changes to the system (e.g. hard disk setup), then you should review this chapter first and note the original settings found in **Setup**. Even if you are a beginner, keep a record of the settings you find and any changes you make. This information could be useful if your system ever needs servicing.

There is one general rule: *Don't make any changes unless you are sure of what you are doing*. Many of the settings are required by the system, and changing them could cause it to become unstable or worse. If you have any doubts, consult your service representative.



BIOS Screens

Note that the BIOS screens pictured on these pages are intended for guidance in setting up your system's BIOS.

BIOS versions are subject to constant change and revision, therefore your computer's actual screens may appear slightly different from those pictured on these pages.



BIOS Settings Warning

Incorrect settings can cause your system to malfunction. To correct mistakes, return to *Setup* and restore the **Previous Values** with <F2>, or **Optimized Defaults** with <F3>.

UEFI Boot & POST

When UEFI Boot is enabled, then the prompts to **press F2 or F7** will **not appear**. However you can still press F2 to enter the setup, or F7 to choose the preferred boot device, if you press the key immediately the system boots up.

The Setup Utility

Each time you turn on the computer the system takes a few seconds to conduct a **POST**, including a quick test of the on-board RAM (memory).

As the **POST** proceeds, the computer will tell you if there is anything wrong. If there is a problem that prevents the system from booting, it will display a system summary and prompt you to run *Setup*.

If there are no problems, the *Setup* prompt will disappear and the system will load the operating system. Once that starts, you can't get into *Setup* without rebooting.

The **Aptio Setup Utility** tells the system how to configure itself and manage basic features and subsystems (e.g. port configuration).

To enter *Setup*, turn on the computer and press **F2** (give the system a few seconds to enter *Setup*). If the **Boot Logo** is enabled the **F2** on screen will be **highlighted** to illustrate that the system is processing the request during the **POST** (or press **F7** for boot options). If you get a "Keyboard Error", (usually because you pressed **F2** too quickly) just press **F2** again.

If the computer is already on, reboot using the **Ctrl + Alt + Delete** combination and then hold down **F2** when prompted. The *Setup* main menu will appear.

To see the boot options press **F7** and choose your preferred boot device.

Failing the POST

Errors can be detected during the **POST**. There are two categories, “fatal” and “non-fatal”.

Fatal Errors

These stop the boot process and usually indicate there is something seriously wrong with your system. Take the computer to your service representative or authorized distributor/supplier as soon as possible.

Non-Fatal Errors

This kind of error still allows you to boot. You will get a message identifying the problem (make a note of this message!) and you can then press **F7** (the **F7** on screen will be **highlighted** to illustrate that the system is processing the request) for boot options.

Press **F2** (give the system a few seconds to enter *Setup*; the **F2** on screen will be highlighted to illustrate that the system is processing the request) to run the **Setup** program and try to correct the problem. If you still get an error message after you change the setting, or if the “cure” seems even worse, call for help.



Setup Menus

The **Setup** menus shown in this section are for **reference** only. Your computer's menus will indicate the configuration appropriate for your model and options.

Figure 5 - 1
Navigation Menu

Setup Screens

The following pages contain additional advice on portions of the *Setup*. Along the top of the screen is a menu bar with menu headings. When you select a heading, a new screen appears. Scroll through the features listed on each screen to make changes to *Setup*.

Instructions on how to navigate each screen are in the box at the bottom right side of the screen.

```
→←: Select Screen
↑↓: Select Item
Enter: Select
+/-: Change Opt.
F1: General Help
F3: Optimized Defaults
F4: Save Changes & Exit
ESC: Exit
```

If these tools are confusing, press **F1** to call up a **General Help** screen, and then use the arrow keys to scroll up or down the page.

The **Item Specific Help** on the upper right side of each screen explains the highlighted item and has useful messages about its options.

If you see an arrow ► next to an item, press **Enter** to go to a sub-menu on that subject. The sub-menu screen that appears has a similar layout, but the **Enter** key may execute a command.

Main Menu

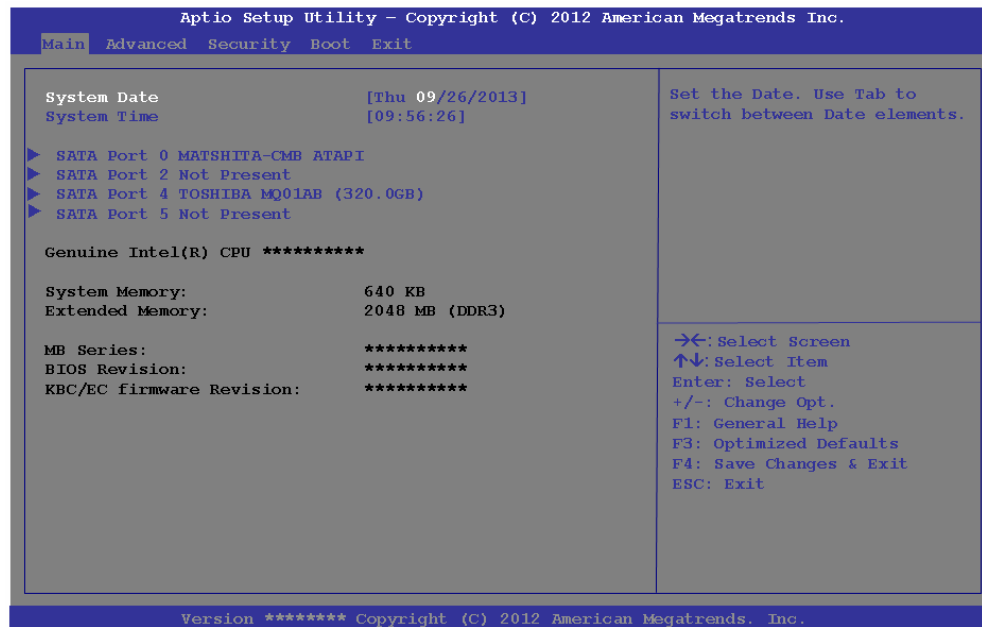


Figure 5 - 2
Main Menu

System Time & Date (Main Menu)

The hour setting uses the 24-hour system (i.e., 00 = midnight; 13 = 1 pm). If you can change the date and time settings in your operating system, you will also change these settings. Some applications may also alter data files to reflect these changes.

SATA Port # (Main Menu)

Pressing **Enter** opens the sub-menu to show the configuration of a optical Device/HDD on the computer's SATA Ports.

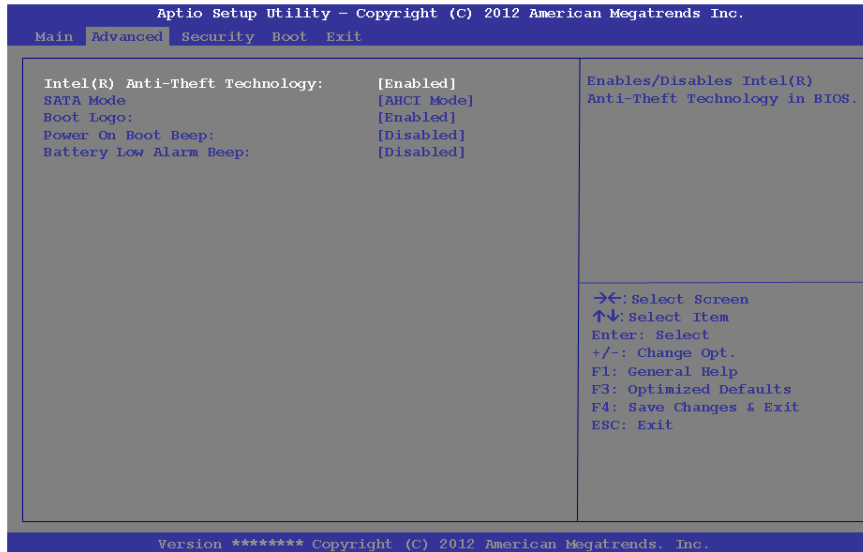
System/Extended Memory: (Main Menu)

This item contains information on the system memory, and is not user configurable. The system will auto detect the amount of memory installed.

MB Series / BIOS Revision / KBC/EC firmware Revision

This item contains information on the BIOS version etc., and is not user configurable.

Advanced Menu



UEFI Boot

When UEFI Boot is enabled, then the prompts to press **F2** or **F7** will not appear. However you can still press **F2** to enter the setup, or **F7** to choose the preferred boot device, if you press the key immediately the system boots up.

5

Figure 5 - 3
Advanced Menu

Intel(R) Anti-Theft Technology (Advanced Menu)

Anti-Theft Technology, which is built-in to the processor of the computer, allows system administrators to render your computer useless to thieves by sending a poison pill encrypted SMS message over a 3G network etc. Administrators can also remotely unlock a recovered computer quickly, or direct the system to send location information (GPS coordinates) back to a central server.



SATA Mode Selection

If you have installed the **Windows** OS with either **IDE** or **AHCI** mode enabled, **DO NOT** disable the set mode (if you wish to disable the set mode you will need to reinstall the **Windows** OS).

SATA Mode Selection (Advanced Menu)

You can configure SATA (Serial ATA) control to operate in **IDE** (native/compatible), **AHCI** (Advanced Host Controller Interface) modes from this menu. The **SATA Mode** should be set **BEFORE installing an operating system**, and after you have backed up all necessary files and data (see sidebar).

Boot Logo (Advanced Menu)

Use this menu item to enable/disable the **Boot Logo** screen at system startup. If you disable the **Boot Logo** you will not see the **F2 Enter Setup** or **F7 Boot Options** prompts on the screen, however you can still press these keys, while the boot screen is displayed, to perform the Enter Setup or Boot Option functions.

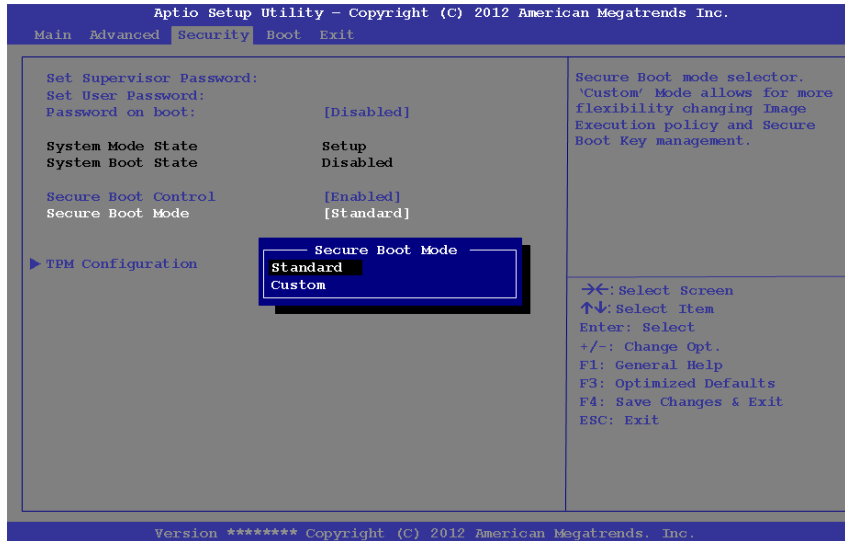
Power On Boot Beep (Advanced Menu)

Use this menu item to enable/disable the beep as the computer starts up.

Battery Low Alarm Beep (Advanced Menu)

Use this menu item to enable/disable the battery low alarm beep.

Security Menu



Security Menu

The changes you make here affect the access to the Setup utility itself, and also access to your machine as it boots up after you turn it on. These settings do not affect your machine or network passwords which will be set in your software OS.

Figure 5 - 4
Security Menu

Set Supervisor Password (Security Menu)

You can set a password for access to the **Aptio Setup Utility**. This will not affect access to the computer OS (only the **Aptio Setup Utility**).

Note: To clear existing passwords press **Enter** and type the existing password, then press **Enter** for the new password (without typing any password entry) and **Enter** again to confirm the password clearance.



Password Warning

If you set a boot password (Password on boot is “Enabled”), **NEVER** forget your password.

The consequences of this could be serious. If you cannot remember your boot password you must contact your vendor and you may lose all of the information on your hard disk.

5

Set User Password (Security Menu)

You can set a password for user mode access to the **Aptio Setup Utility**. This will not affect access to the computer OS, (only the **Setup** utility) unless you choose to set a **Password on Boot** (see below). Many menu items in the **Aptio Setup Utility** cannot be modified in user mode.

Note: *You can only set the user password after you have set the supervisor password.*

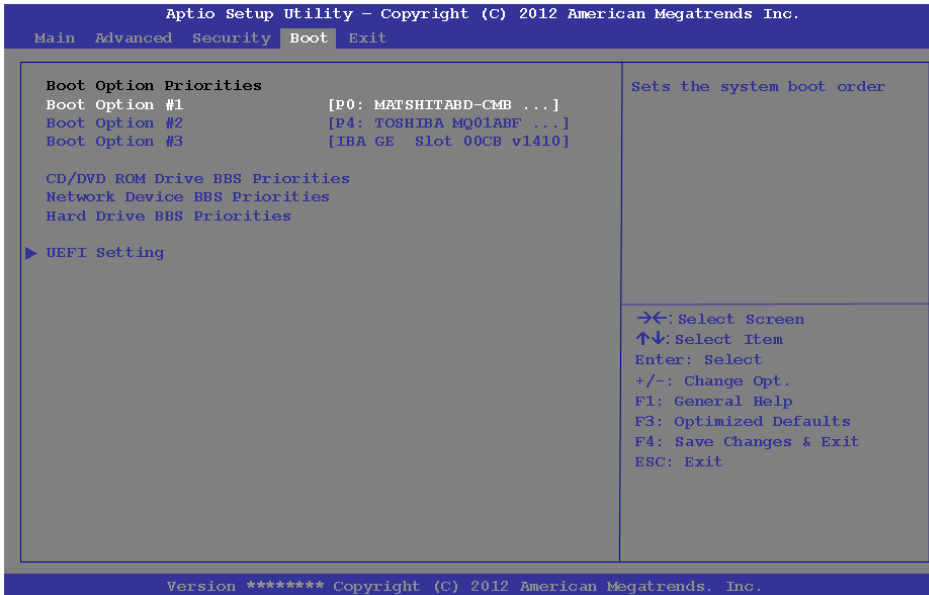
Password on boot: (Security Menu)

Specify whether or not a password should be entered to boot the computer (**you may only set a password on boot if a supervisor password is enabled**). If “**Enabled**” is selected, only users who enter a correct password can boot the system (**see the warning in the sidebar**). The default setting is “**Disabled**”.

Secure Boot Control (Security Menu)

Secure Boot prevents unauthorized operating systems and software from loading during the startup process. **Secure Boot Control** is available as a menu option if you have **enabled UEFI Boot** (see “**UEFI Boot (Boot Menu)**” on page 5 - 12). Enabling Secure Boot will bring up the **Secure Boot Mode** menu to enable you to configure Secure Boot as **Standard** (with a fixed secure boot policy) or **Custom** (which enables you to make changes to the **Key Management** database).

Boot Menu



When you turn the computer on it will look for an operating system (e.g. **Windows 7**) from the devices listed in this menu, and **in this priority order**. If it cannot find the operating system on that device, it will try to load it from the next device in the order specified in the **Boot Option Priorities**. Item specific help on the right is available to help you move devices up and down the order.



BIOS Settings Warning

Incorrect settings can cause your system to malfunction. To correct mistakes, return to *Setup* and restore the **Previous Values** with <F2>, or **Optimized Defaults** with <F3>.

UEFI Boot & POST

When UEFI Boot is enabled, then the prompts to **press F2 or F7 will not appear**. However you can still press F2 to enter the setup, or F7 to choose the preferred boot device, if you press the key immediately the system boots up.

Boot Option Priorities (Boot Menu)

Press Enter to access the menu, use the arrow keys to move up and down the menu, and press Enter to select a device from the **Boot Option #** list (the selected device will be highlighted in white).

UEFI Boot (Boot Menu)

Enable/disable UEFI Boot from this menu. The Unified Extensible Firmware Interface (UEFI) specification provides a clean interface between operating systems and platform firmware at boot time. In contrast to BIOS, UEFI defines a set of standard boot and runtime services. The **Network Stack** item will be enabled as an option under UEFI Boot.

Exit Menu

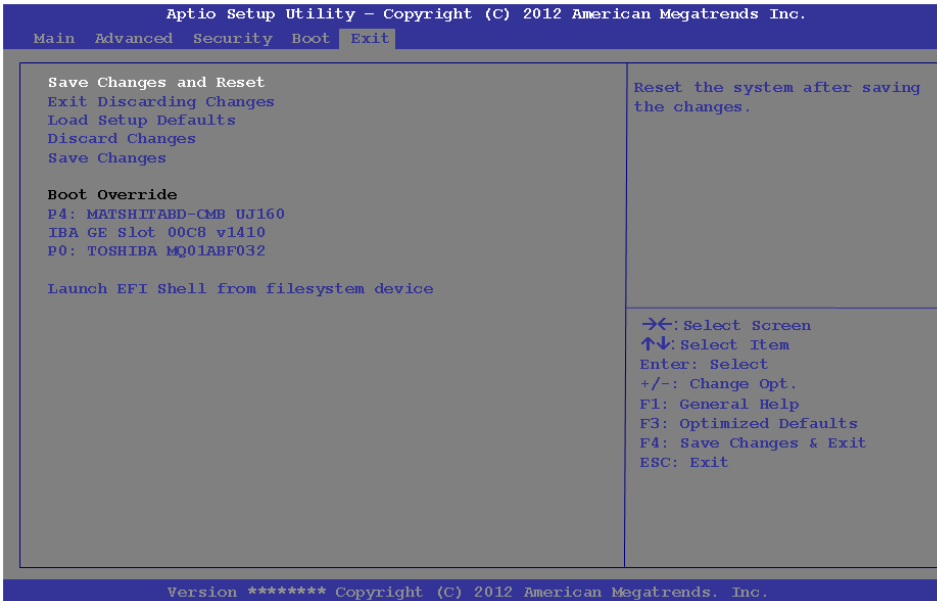


Figure 5 - 5
Exit Menu

Click ***Save Changes and Reset*** to save all changes made. Choosing to ***Discard Changes***, or ***Exit Discarding Changes***, will wipe out any changes you have made to the ***Setup***. You can also choose ***Load Setup Defaults*** to restore the original ***Setup*** defaults and return the ***Setup*** to its original state, and erase any previous changes you have made in a previous session.

Chapter 6: Upgrading The Computer

Overview

This chapter contains information on upgrading the computer. Follow the steps outlined to make the desired upgrades. If you have any trouble or problems you can contact your service representative for further help. Before you begin you will need:

- A small crosshead or Phillips screwdriver (see sidebar)
- A small regular slotted (flathead) screwdriver
- An antistatic wrist strap

Before working with the internal components you will need to wear an antistatic wrist strap to ground yourself because static electricity may damage the components.

The chapter includes:

- Removing the Battery
- Removing the Rear Component Cover
- Upgrading the Hard Disk Drive/SSD
- Upgrading the Optical (CD/DVD) Device Drive
- Upgrading the System Memory (RAM)

Please make sure that you review each procedure before you perform it.



Warranty Warning

Please check with your service representative before undertaking any upgrade procedures to find out if this will VOID your warranty.

Screwdriver Types

Make sure you use a small manual screwdriver, and **not an electrical screwdriver**, in the course of the upgrade/disassembly procedures outlined here, due to the delicate nature of the screws.



Power Safety Warning

Before you undertake any upgrade procedures, make sure that you have turned off the power, and disconnected all peripherals and cables (including telephone lines and power cord).

When Not to Upgrade

These procedures involve opening the system's case, adding and sometimes replacing parts.

You should **not** perform any of these upgrades if:

- Your system is still under warranty or a service contract
- You don't have all the necessary equipment
- You're not in the correct environment
- You doubt your abilities

Under any of these conditions, contact your service representative to purchase or replace the component(s).



Removal Warning

When removing any cover(s) and screw(s) for the purposes of device upgrade, remember to replace the cover(s) and screw(s) before turning restoring power to the system.

Also note the following when the cover is removed:

- Hazardous moving parts.
- Keep away from moving fan blades.

Removing the Battery

If you are confident in undertaking upgrade procedures yourself, for safety reasons it is best to remove the battery. **Before removing the battery disconnect the AC/DC adapter from the computer first.**

1. Turn the computer off, remove the AC/DC adapter.
2. Slide the latch **1** in the direction of the arrow.
3. Slide the latch **2** in the direction of the arrow, and hold it in place.
4. Slide the cover in the direction of the arrow until the bottom marker of the battery cover icon **3** is aligned with the marker on the side of the computer **4**.
5. Remove the battery bay **5** cover.



Warranty Warning

Please check with your service representative before undertaking any upgrade procedures to find out if this will VOID your warranty.

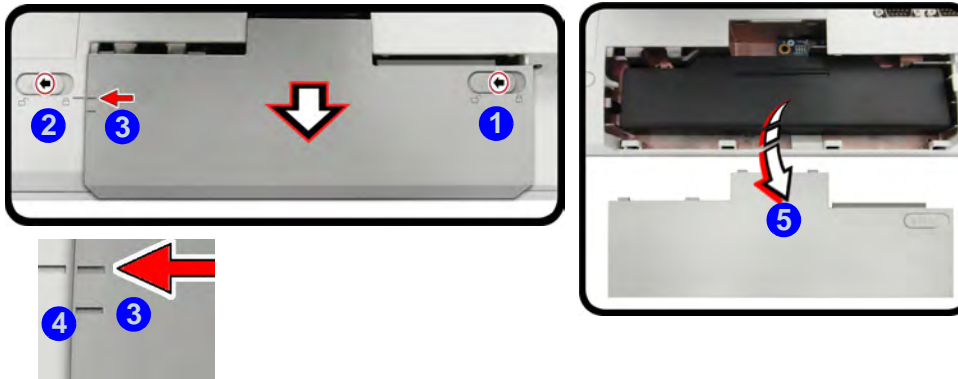


Figure 6 - 1
**Battery Bay Cover
Removal**

Upgrading The Computer

6. Raise the battery up out of the bay 6.
7. Remove the battery 7.

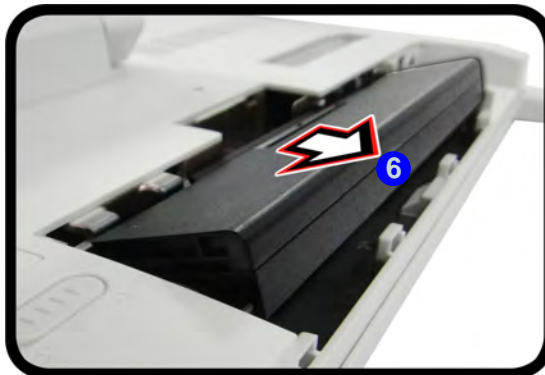
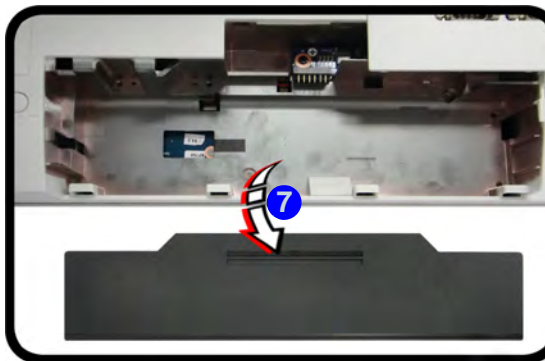


Figure 6 - 2
Battery Removal



Inserting the Battery

1. Insert the battery **1** at an angle and slide it firmly into the battery bay until connected.
2. Insert the battery bay cover by angling it to fit on the right **2** at first, and then click the left side into place **3**.
3. Slide the cover in the direction of the arrow **4** until the top marker of the battery cover icon **5** is aligned with the marker on the side of the computer **6**.
4. Slide the latches **7** towards the lock symbols to lock the cover in place.

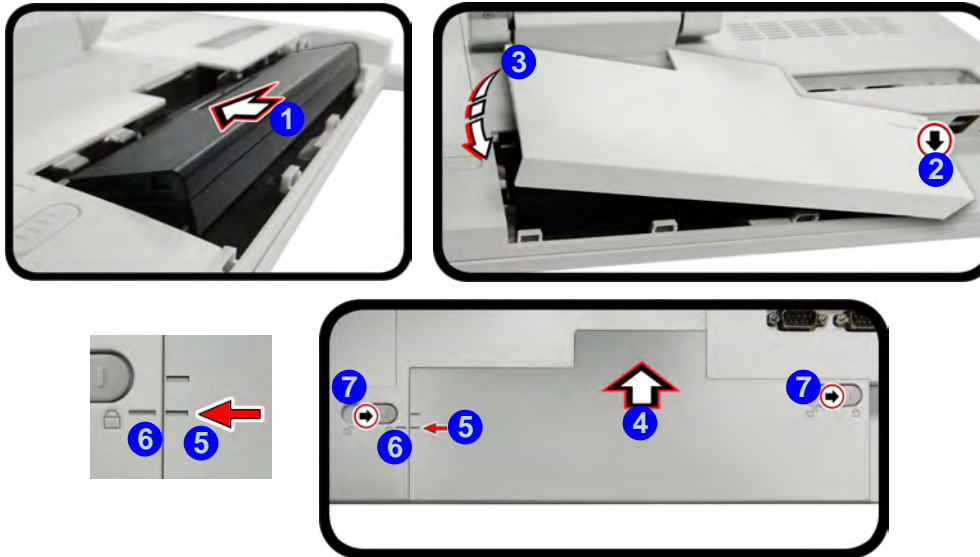


Figure 6 - 3
Battery & Cover
Insertion

Removing the Rear Component Cover

Before undertaking any upgrade procedure it is necessary to remove the rear cover component cover to access the components.

1. Turn **off** the computer and disconnect all cables and peripherals.
2. Carefully place the computer flat with the LCD facing down (make sure you cover the LCD to avoid scratches) so that you may access the rear cover.
3. Remove screws **1** & **2**.



Figure 6 - 4
Rear Cover Screws

- Slide the rear cover up in the direction of the arrow ③, until the bottom marker of the rear cover icon is aligned with the marker on the side of the computer ④.



Figure 6 - 5
Rear Cover Unlock

- Carefully remove the rear cover ⑤, and set it aside.

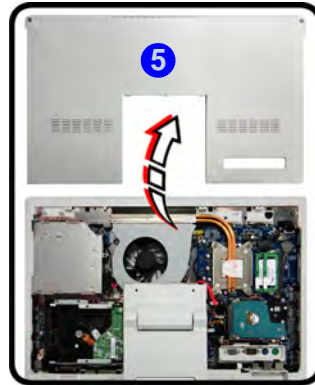


Figure 6 - 6
Rear Cover Remove

Inserting the Rear Cover

1. Carefully slide the rear cover on to the computer until the marker of the rear cover icon is aligned with the marker on the side of the computer ①.
2. Replace screws ② & ③.

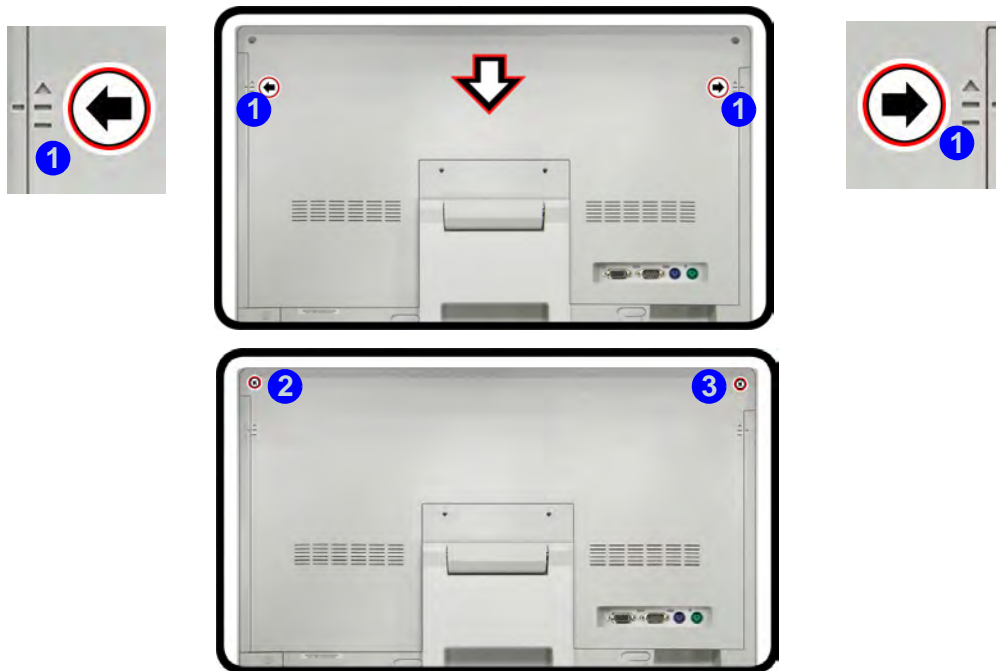


Figure 6 - 7
**Inserting the Rear
Cover**

Upgrading the Hard Disk Drive/SSD

The hard disk drive can be taken out to accommodate other 2.5"(63.5mm) or 3.5"(88.9mm) serial (SATA) hard disk drives (see *"Storage" on page C - 3*), or a Solid State Drive (SSD). Follow your operating system's installation instructions, and install all necessary drivers and utilities (as outlined in *"Driver Installation Procedure" on page 4 - 7*), when setting up a new hard disk.

See the following pages for the appropriate information:

- *"Removing the 3.5" (88.9mm) HDD" on page 6 - 10.*
- *"Replacing the Brackets & Screws in the 3.5" (88.9mm) HDD" on page 6 - 12.*
- *"Removing the 2.5" (63.5mm) HDD or SSD" on page 6 - 14.*
- *"Removing the 2.5" (63.5mm) HDD from the Bracket." on page 6 - 15.*
- *"Removing the SSD from the Bracket." on page 6 - 16*



HDD System Warning

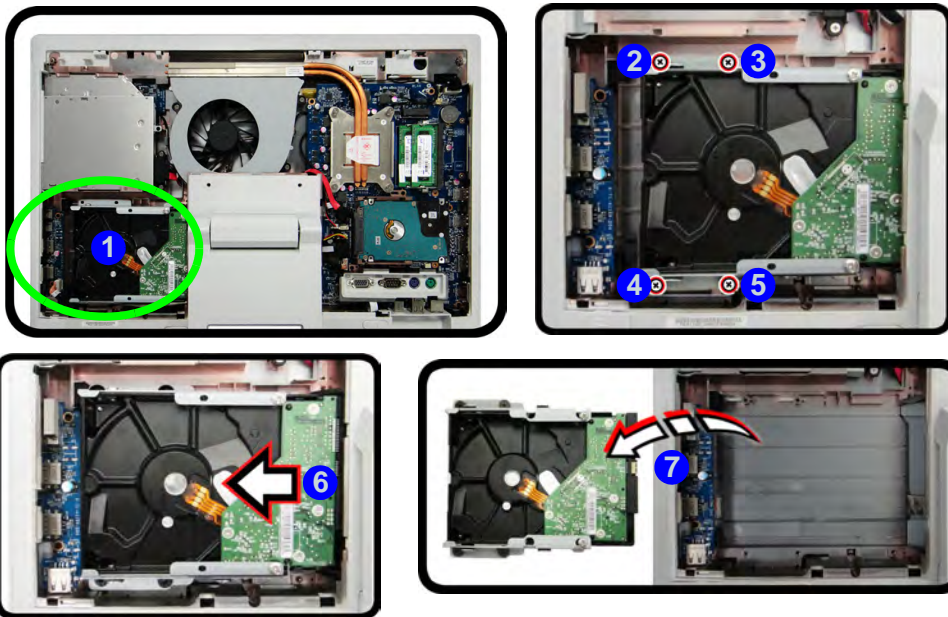
New HDD's are blank. Before you begin make sure:
You have backed up any data you want to keep from your old HDD.
You have all the CD-ROMs and FDDs required to install your operating system and programs.
If you have access to the internet, download the latest application and hardware driver updates for the operating system you plan to install. Copy these to a removable medium.

Removing the 3.5" (88.9mm) HDD

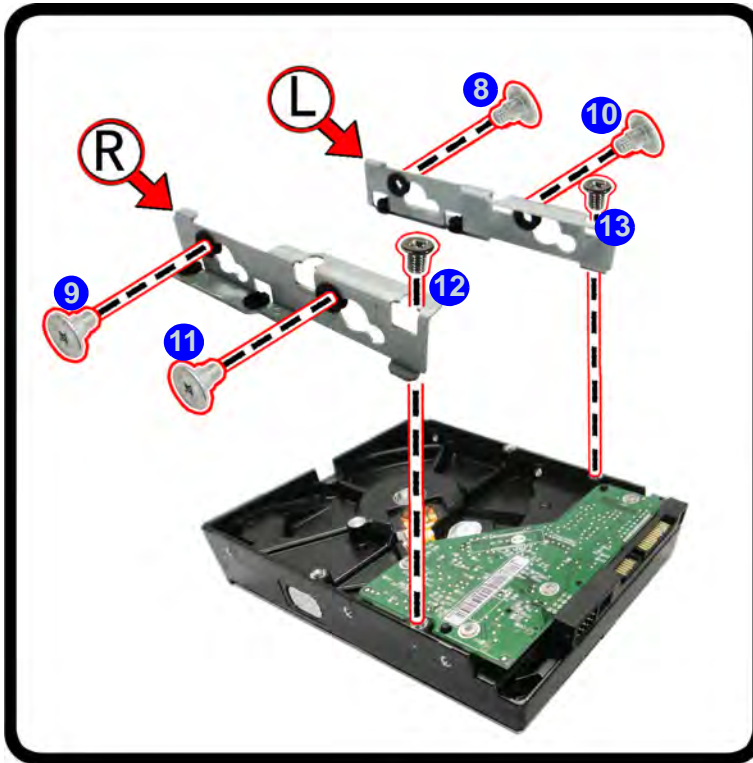
1. Remove the battery and rear cover (see pages 6 - 3 & 6 - 5).
2. The hard disk is located at point 1.
3. Remove screws 2 - 5 from the hard disk bracket.
4. Slide the HDD assembly in the direction of arrow 6.
5. Lift the HDD assembly 7 out of the computer.

6

Figure 6 - 8
3.5" HDD Assembly
Removal



6. Remove screws **8** - **13** from the hard disk bracket
7. Remove the left and right side brackets from the HDD.



Screwdriver Types

Make sure you use a small manual screwdriver, and **not an electrical screwdriver**, in the course of the upgrade/disassembly procedures outlined here, due to the delicate nature of the screws.

6

Figure 6 - 9
**3.5" HDD Assembly
Removal**



Screw Types

Note that **screws 1 & 2**, and **screws 3 - 6** are different. Screws **1 & 2** are for the top of the bracket, and screws **3 - 6** are for the side of the bracket.

Replacing the Brackets & Screws in the 3.5" (88.9mm) HDD

1. Before replacing the brackets and screws for any new HDD, **it is important to note** that there are **left and right brackets** for the side of the assembly, and **the screws need to be inserted in the appropriate order**.
2. The control board is on the top of the HDD, and the interface board is at the rear.
3. The Left and Right brackets are marked with an **L & R** symbol.
4. Attach the left and right brackets as illustrated.
5. Firstly screw in the 2 top case screws **1 & 2** (note the screw type).
6. Secondly screw in the 4 side case screws **3 - 6** (note the screw type).



HDD Brackets & Screws

Note the orientation of the brackets before reinserting the screws. The screw holes (on the bottom of the brackets) for attaching the assembly to the board must face outward.

The screws must be attached in the order illustrated, with **the top case screws being attached before the side case screws**.

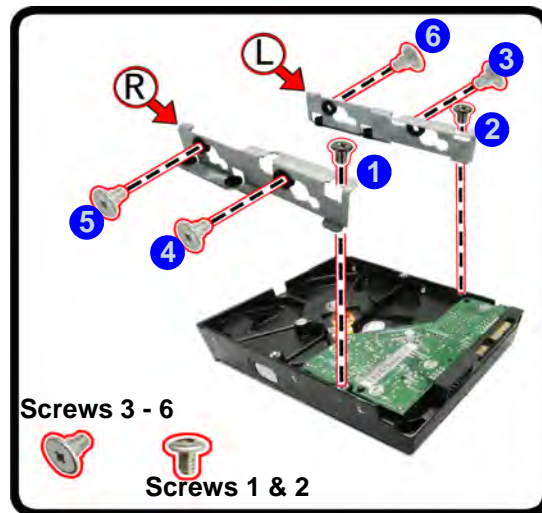
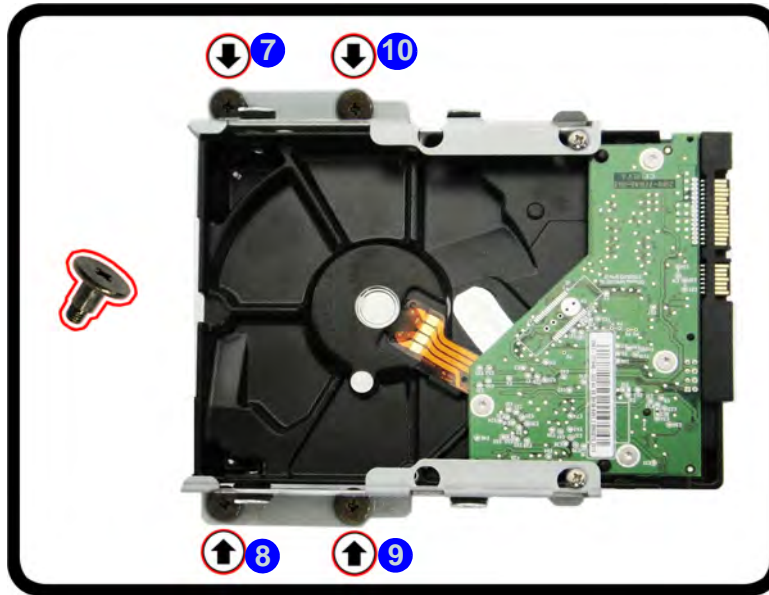


Figure 6 - 10
**3.5" Hard Disk
Assembly Brackets
& Screw Insertion**

7. It is important to set the screws **7** - **10** (for screwing the HDD assembly to the case) in place in the HDD assembly before sliding the assembly into the case.
8. Once the screws are set in place slide the whole assembly including the screws into place as per *Figure 6 - 8 on page 6 - 10*.
9. Make sure the HDD is connected to the slot and then tighten the four screws and replace the rear component cover and screws.



Screwdriver Types

Make sure you use a small manual screwdriver, and **not an electrical screwdriver**, in the course of the upgrade/disassembly procedures outlined here, due to the delicate nature of the screws.

Figure 6 - 11
3.5" Hard Disk
Assembly Brackets
& Screw Insertion



Foam Insert for SSDs

Note that if your computer contains an SSD in the bracket then a foam insert will be supplied. Make sure you have the foam inserted when installing an SSD to this bracket (see *“Removing the SSD from the Bracket.”* on page 6 - 16).

Removing the 2.5" (63.5mm) HDD or SSD

1. Remove the battery and rear cover (see pages 6 - 3 & 6 - 5).
2. The hard disk or solid state drive is located at point 1.
3. Remove screws 2 & 3 from the bracket (make sure you **use a small manual screwdriver** and not an electrical screwdriver to do this, due to the delicate nature of the screws).
4. Lift the HDD assembly 4 out of the computer.

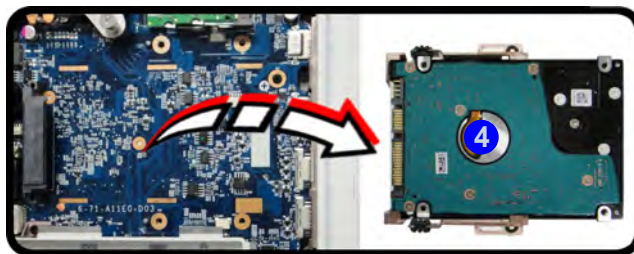
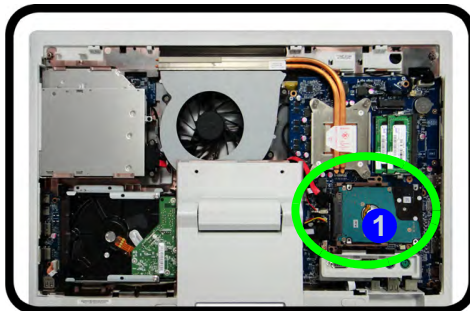


Figure 6 - 12
2.5" HDD/SSD
Assembly Removal

Removing the 2.5" (63.5mm) HDD from the Bracket.

5. Remove screws **1** & **2** and separate the bracket **3** from the HDD **4**.
6. Reverse the process to install a new hard disk.

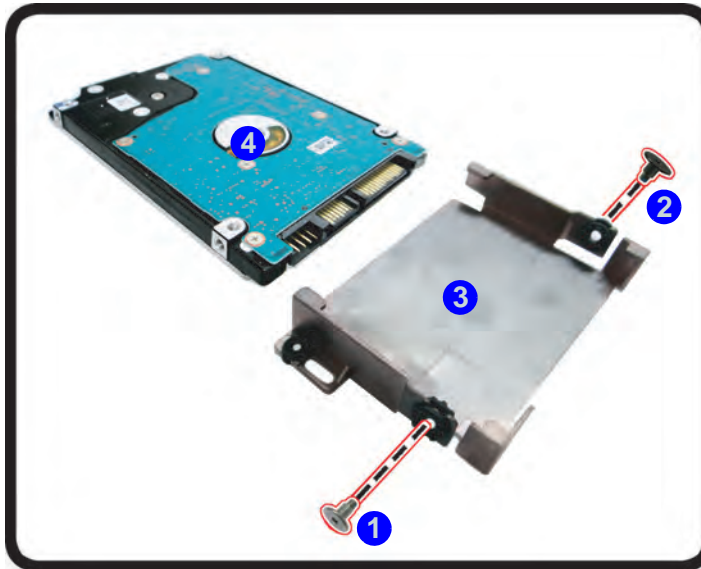


Figure 6 - 13
**2.5" Hard Disk
Assembly Brackets
& Screws**

Removing the SSD from the Bracket.

1. Remove screws **1** & **2** and separate the bracket and sponge assembly **3** from the HDD **4**.
2. Separate the bracket **5** from the sponge **6**.
3. **Make sure you insert the sponge when installing a new HDD.**
4. Reverse the process to install a new hard disk.

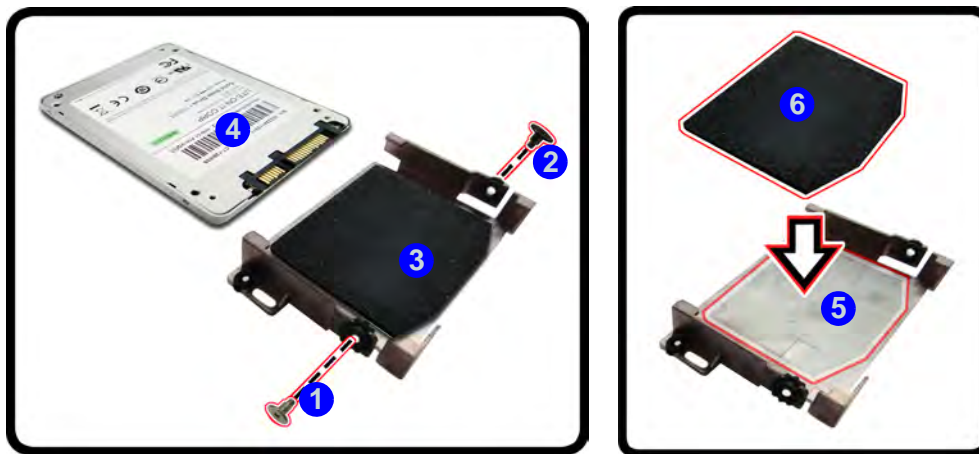


Figure 6 - 14
SSD Assembly
Brackets, Screws &
Sponge

Upgrading the Optical (CD/DVD) Device Drive

1. Remove the battery and rear cover (see pages 6 - 3 & 6 - 5).
2. The ODD is located at point 1.
3. Remove the screw 2, and use a screwdriver to carefully push out the optical device out in the direction of the arrow at point 3.
4. Reverse the process to install any new optical device.

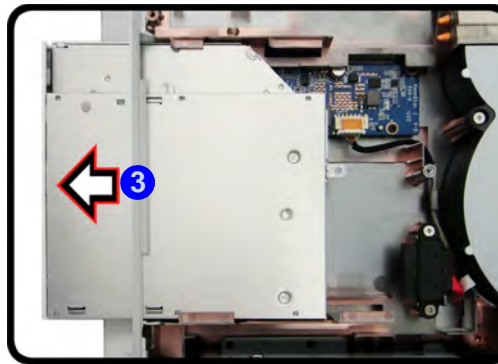
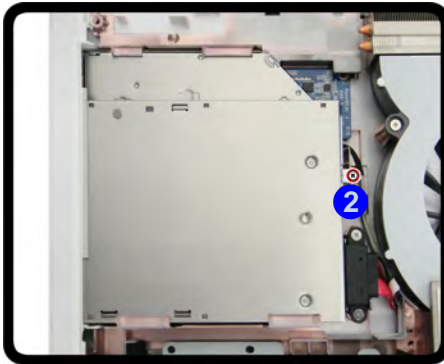
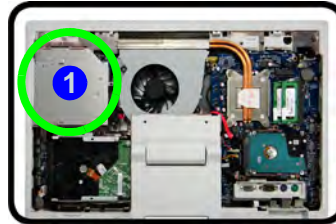


Figure 6 - 15
Removing the ODD



Contact Warning

Be careful not to touch the metal pins on the module's connecting edge. Even the cleanest hands have oils which can attract particles, and degrade the module's performance.

Upgrading the System Memory (RAM)

The computer has **two** memory sockets for 204 pin Small Outline Dual In-line (SO-DIMM) **DDRIII (DDR3)** type memory modules (see *“Memory” on page C - 2* for details of supported module types).

The total memory size is automatically detected by the POST routine once you turn on your computer.

1. Remove the battery and rear cover (see pages **6 - 3** & **6 - 5**).
2. The RAM is located at point **1**.

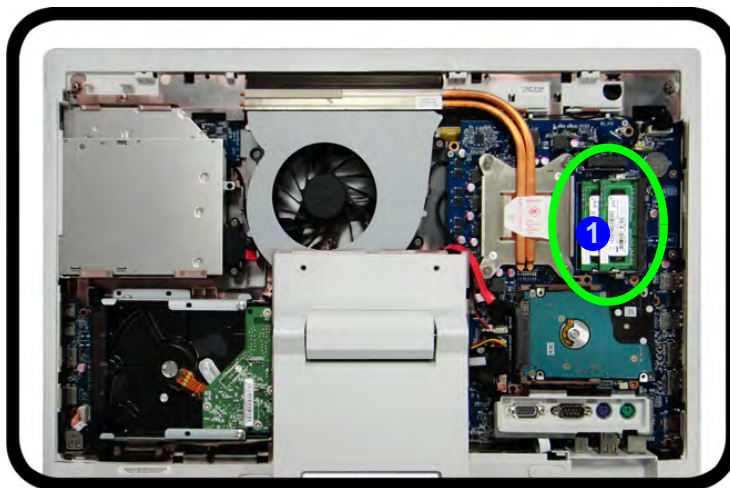


Figure 6 - 16
RAM Location

3. Gently pull the two release latches on the sides of the memory socket in the direction indicated by the arrows (2 & 4) in *Figure 6 - 17*.



Figure 6 - 17
**RAM Module
Release**

4. The RAM module will pop-up, and you can remove it.
5. Pull the latches to release the second module if necessary.

Upgrading The Computer

6. Insert a new module holding it at about a 30° angle and fit the connectors firmly into the memory socket (see sidebar note if you are inserting a single module).

Figure 6 - 18
**RAM Module
Removal**



7. The module's pin alignment will allow it to only fit one way. Make sure the module is seated as far into the slot as it will go. **DO NOT FORCE** the module; it should fit without much pressure.
8. Press the module in and down towards the mainboard until the slot levers click into place to secure the module.
9. Replace the module bay cover and screws.
10. Restart the computer to allow the BIOS to register the new memory configuration as it starts up.



Single Memory Module Installation

If your computer has a single memory module, then insert the module into the **Channel 0 (JDIMM1)** socket. In this case this is the **upper memory socket** (the socket furthest from the mainboard).

Upgrading the Processor

If you want to upgrade your computer by replacing the existing processor with a faster/new one you will need to contact your customer service representative. We recommend that you do not do this yourself, since if it is done incorrectly you may damage the processor or mainboard.



Warranty

The CPU is not a user serviceable part. Accessing the CPU in any way, may violate your warranty.

Unauthorized tampering with the HDD may also violate your warranty.

Chapter 7: Modules & Options

Overview

This chapter contains information on the following modules, which may come with your computer, depending on the configuration purchased. If you are unsure please contact your service representative.

- PC Camera Module
- Wireless LAN Module
- Bluetooth & WLAN Combo Module
- Trusted Platform (Security) Module
- Wireless Display

PC Camera Module

When the **Camera** application is run the LED indicator to the left of the camera will be illuminated in **red** (see ② *Figure 1 - 2 on page 1 - 6*). Note that you need to use the **Camera** app in **Windows** to take pictures and capture video.

PC Camera Audio Setup

If you wish to capture video & **audio** with your camera, it is necessary to setup the audio recording options in *Windows*.

1. Go to the **Control Panel**.
2. Click/tap **Sound** (Hardware and Sound) and click/tap **Recording** (tab).
3. Right-click/tap, hold and release **Microphone** (Realtek High Definition Audio) and make sure the item is not disabled.
4. Double-click/tap **Microphone** (or select **Properties** from the right-click menu).
5. Click/tap **Levels** (tab), and adjust the **Microphone** and **Microphone Boost** sliders to the level required.
6. Click/tap **OK** and close the control panels.

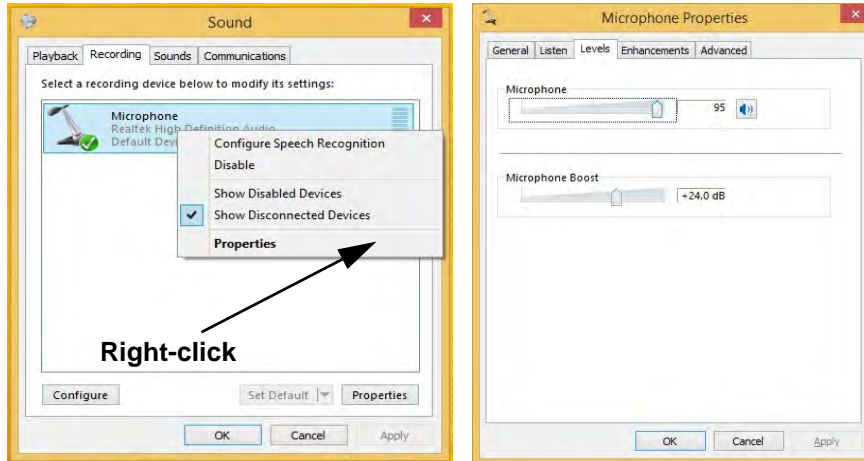


Figure 7 - 1
**Audio Setup for PC
Camera**

Camera App


1. Run the **Camera** app from the Start screen by clicking on the **Camera** app icon .
2. The camera interface will display two buttons on the right side of the screen.

Figure 7 - 2
Camera App Buttons

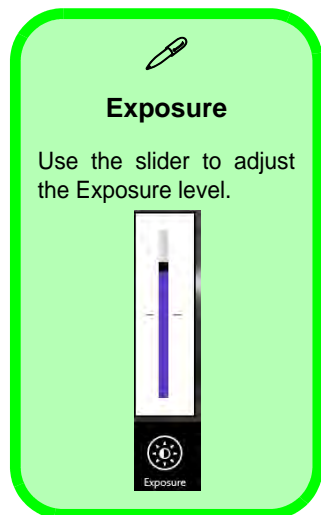
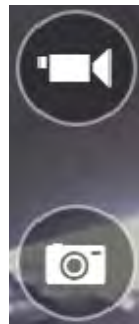




Figure 7 - 3
Camera Options



3. The upper button  is used to record video, and the lower button  is used to take still pictures.
4. **Right-click** on the screen to bring up menu buttons at the bottom of the screen.
5. These buttons enable you to access the **camera roll** (where captured pictures and video are displayed), set the **timer** (the time period before capture begins; 3 seconds, 10 seconds or Off) and set the exposure level using the slider to obtain the best results.



Camera Options

The **Camera Options** settings may be accessed as follows:

1. Run the **Camera** app from the **Start** screen by clicking on the **Camera** app icon
2. While the camera app is running access the **Charms Bar** (e.g. click Use the **Windows** logo key + **D** key combination).
3. Click **Settings** and then click **Options**.
4. You can adjust the **Photo Aspect Ratio**, select the **Microphone**, **Hide/Show** grid lines and turn Location Info on or off from the **Options** panel.

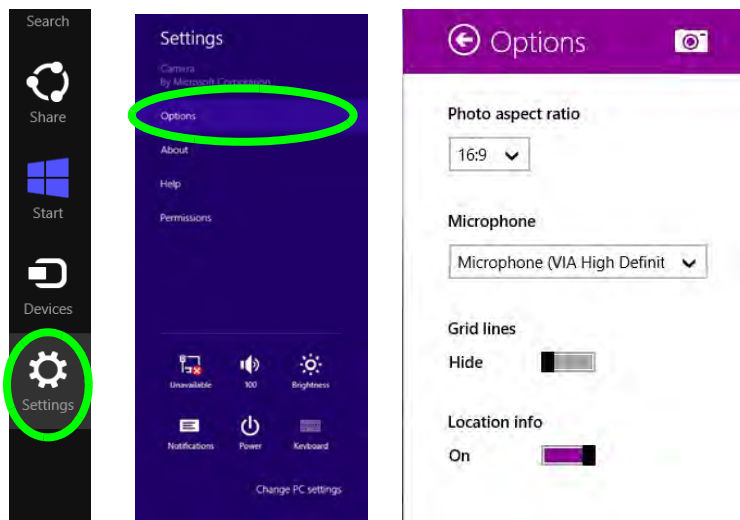




Figure 7 - 4
Camera Options

Taking Pictures/Capturing Video

1. Run the **Camera** app from the **Start** screen by clicking on the **Camera** app icon .
2. Right-click the screen and select the timer if you require a countdown before capture.
3. Click the appropriate icon to take a picture or start video capture (if video capture begins a timer will appear in the bottom corner of the screen).
4. To stop video capture click the main window again (or click the stop icon ).
5. Captured photos and videos will be saved to a **Camera Roll** folder within the **Pictures** folder.

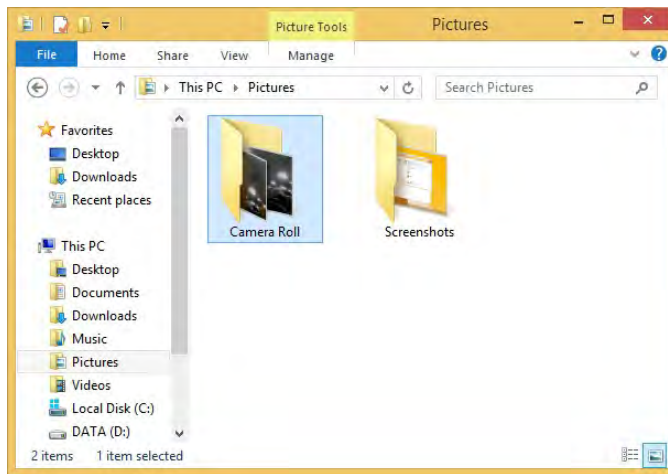





Figure 7 - 5
**Pictures - Camera
Roll**

Camera Roll

1. Run the **Camera** app from the **Start** screen by clicking on the **Camera** app icon .
2. **Right-click** on the screen to bring up menu buttons at the bottom of the screen.
3. Click **Camera Roll**.
4. Click the arrows  /  (on either side of the screen) to browse through the captured photos/video, and back to the Camera app.

Editing Photos

1. Clicking on a **captured photo** will bring up an app bar with a series of buttons.



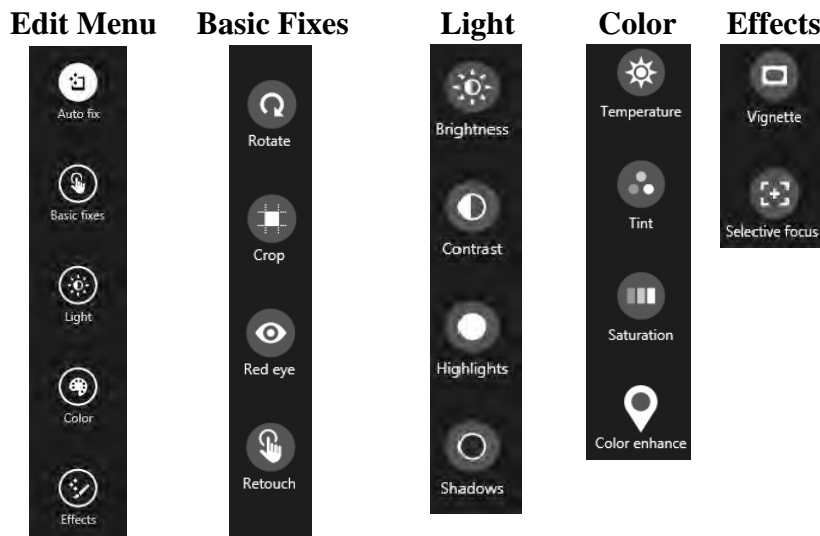
Figure 7 - 6
Edit Buttons
(for Still Photos)

2. The **Camera** button will take you back to the home screen of the camera app.
3. Click **Delete** to remove any photo from the camera roll (you will be asked to click **Delete** again to confirm the deletion).
4. The **Open With** button will allow you to select a program with which to open the photo.
5. You can click **Set as Lock screen** to set the photo as the lock screen picture.
6. Clicking **Slide Show** will create a slide show of photos/video in the camera roll.
7. Click **Rotate** to rotate the picture through 90 degrees.
8. Use the handles to **Crop** any captured picture, and click **Apply** to make the changes (you can change the **Aspect** ratio by clicking the button and selecting an aspect ratio from the menu). You can **Save a copy** (create another copy of the

photo with the edited changes), **Update original** (which changes the original picture permanently) or **Undo** any changes.

9. Click the **Edit** button to bring up a full suite of tools to edit the photo.
10. Click on the menu headings on the left, and then click on the tool on the right to edit the photo as required.

Figure 7 - 7
Editing Tools



11. After the editing process is completed right-click on the photo to **Save a copy** (create another copy of the photo with the edited changes), **Update original** (which changes the original picture permanently), **Undo** any changes or **Cancel** the editing.

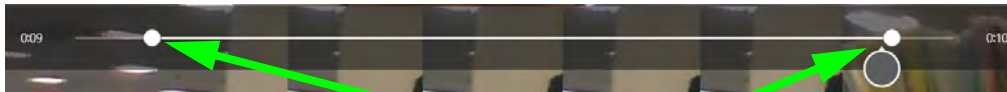
Editing Photos

1. Clicking on a **captured video** will bring up an app bar with a series of buttons.



Figure 7 - 8
Edit Buttons
(for Video)

2. Click **Delete** to remove any video from the camera roll (you will be asked to click **Delete** again to confirm the deletion).
3. The **Open With** button will allow you to select a program with which to run the Video.
4. Clicking **Slide Show** will create a slide show of photos/video in the camera roll.
5. Click **Trim** to edit the video. Use the round buttons at either end of the slider to adjust the video length and click **Save a copy** to save the changes made.



Click to select and move the rounded buttons to edit the video.

Figure 7 - 9
Trim Video
(for Video Files)

Video File Size

Note that capturing high resolution video files requires a substantial amount of disk space for each file. After recording video, check the video file size (right-click the file and select **Properties**) and the remaining free space on your hard disk (go to **My Computer**, right-click the hard disk, and select **Properties**). If necessary you can remove the recorded video file to a removable medium e.g. CD, DVD or USB Flash drive.

Note that the *Windows 8.1* system requires a minimum of **16GB (32-bit)** or **20GB (64-bit)** of free space on the **C: drive** system partition. In order to prevent system problems it is recommended that you move any large sized captured video file to a location other than the **C: drive**.

Wireless LAN Module

If you have included an **Intel®** or **3rd Party** module in your purchase option make sure that the module is on (i.e. the system is not in **Airplane Mode**) before installing the driver.

Make sure you install the drivers in the order indicated in *Table 4 - 1, on page 4 - 4*.

Note that you need to install both the WLAN & Bluetooth drivers for the WLAN & Bluetooth Combo modules.

3rd Party 802.11b/g/n Driver Installation

1. **Make sure the system is not in Airplane Mode**, and then insert the *Device Drivers & Utilities + User's Manual* disc into the DVD drive.
2. Click/tap **Option Drivers** (button).
3. Click/tap **1.Install WLAN Driver > Yes**.
4. Click/tap **Next**.
5. Click/tap **Finish** to restart the computer.
6. The operating system is the default setting for Wireless LAN control in *Windows* (see page [7 - 13](#)).

Intel® WLAN Driver Installation

1. **Make sure the system is not in Airplane Mode**, and then insert the *Device Drivers & Utilities + User's Manual* disc into the DVD drive.
2. Click/tap **Option Drivers** (button).
3. Click/tap **1.Install WLAN Driver > Yes**.
4. Click/tap in the tickbox to agree to the **End User License Agreement** and click **Install**.
5. Click/tap **Finish**.
6. The operating system is the default setting for Wireless LAN control in *Windows* (see page [7 - 13](#)).

WLAN Configuration in Windows

You can configure a wireless connection using one of the following options, however make sure the Wireless LAN module is turned on (and not in Airplane Mode) before configuration begins.

Charms Bar

1. Go to the **Charms Bar**.
2. Select **Settings** and then click the **WiFi icon** (it should read **Available** under the icon and **Airplane mode** should be **Off**).
3. A list of available access points will appear.

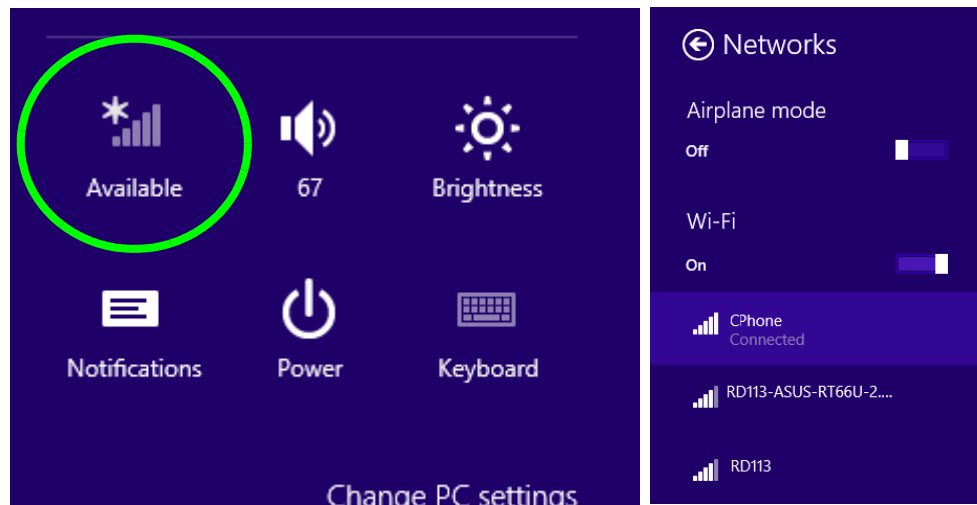




Figure 7 - 10
WiFi Settings
(Charms Bar) &
Networks

Modules & Options

4. Double-click an access point to connect to it (or click it and click **Connect**).
5. Enter a network security key (password) if required, and click **Next**.
6. You can choose to find other devices or not.
7. When you are connected to the network access point it will display **Connected** .
8. Select any connected network and click **Disconnect**  to disconnect from a connected access point.

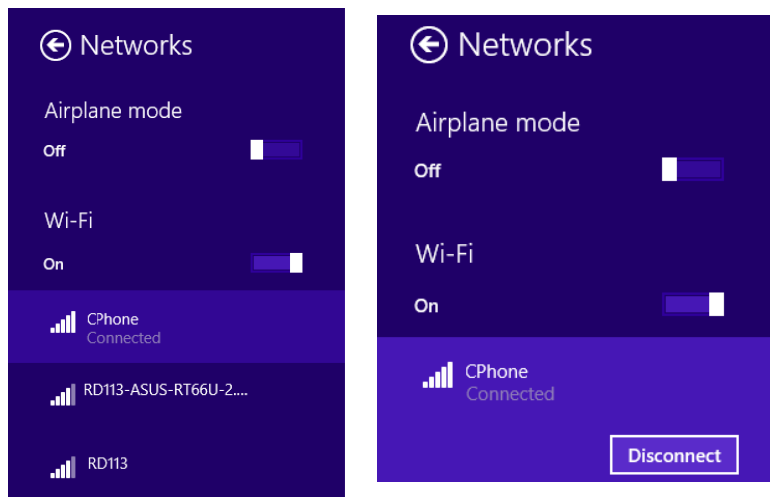




Figure 7 - 11
**Networks
Connected /
Disconnect**

9. You can click the **Airplane Mode** button to turn the mode (including Bluetooth) On or Off.
10. Alternatively you can click the **WiFi** button to turn just the WiFi On or Off.

Desktop Mode

1. Switch to the Windows Desktop (click the app or use the Windows logo key  + **D** key combination).
2. Click the wireless icon  in the notification area of the taskbar.
3. A list of available access points will appear.
4. Double-click an access point to connect to it (or click it and click **Connect**).
5. Enter a network security key (password) if required, and click **Next**.
6. You can choose to find other devices or not.
7. Select any connected network and click **Disconnect** to disconnect from a connected access point.

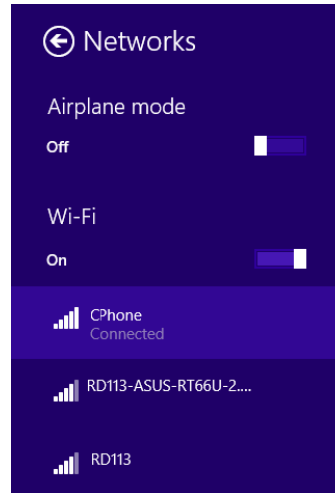
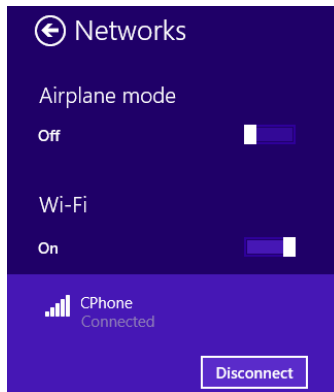
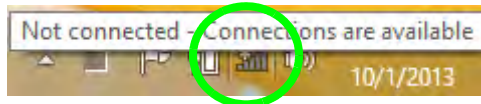


Figure 7 - 12
**Windows Desktop
Taskbar Notification
Area WLAN
Connection**

Bluetooth & WLAN Combo Module

If your purchase option includes the **Combination Wireless LAN & Bluetooth module** (either **Intel®** or **3rd Party**) then install the driver as instructed overleaf.

Make sure that the module is on (i.e. the system is not in **Airplane Mode**) before installing the driver.



Bluetooth Data Transfer

Note that the transfer of data between the computer and a Bluetooth enabled device is supported in one direction only (simultaneous data transfer is not supported). Therefore if you are copying a file from your computer to a Bluetooth enabled device, you will not be able to copy a file from the Bluetooth enabled device to your computer until the file transfer process from the computer has been completed.

3rd Party Bluetooth (V4.0) Combo Driver Installation

1. **Make sure the system is not in Airplane Mode**, and then insert the *Device Drivers & Utilities + User's Manual* disc into the DVD drive.
2. Click/tap **Option Drivers** (button).
3. Click/tap **2.Install Combo BT Driver > Yes**.
4. Click/tap **Next**.
5. Click/tap **Finish** to restart the computer.
6. See *“Bluetooth Configuration in Windows” on page 7 - 18* for configuration instructions.

Intel Bluetooth Combo Driver Installation

1. **Make sure the system is not in Airplane Mode**, and then insert the *Device Drivers & Utilities + User's Manual* disc into the DVD drive.
2. Click/tap **Option Drivers** (button).
3. Click/tap **2.Install Combo BT Driver > Yes**.
4. Click/tap **Next > Next**.
5. Click/tap in the tickbox to accept the license and click **Next**.
6. Click/tap **Next > Finish**.
7. See *“Bluetooth Configuration in Windows” on page 7 - 18* for configuration instructions.



High Speed Bluetooth Data Transfer

The **Combination Wireless LAN & Bluetooth module** supports high speed data transfer. However to achieve such transfer speeds, **both devices must support high speed data transfer**.

To obtain high speed data transfer make sure that **both the WLAN and Bluetooth modules are powered on**.

Check your Bluetooth compatible device's documentation to confirm it supports high speed data transfer.





Bluetooth Headset Stereo Setup

To setup a Bluetooth headset to support stereo audio see page 8 - 13.

Bluetooth Configuration in Windows

You can configure a Bluetooth connection as below, however make sure the Bluetooth module is on (or the system is not in Airplane Mode) before configuration.

Desktop Mode

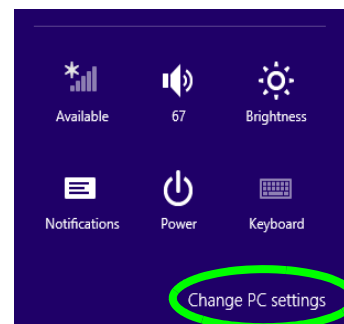
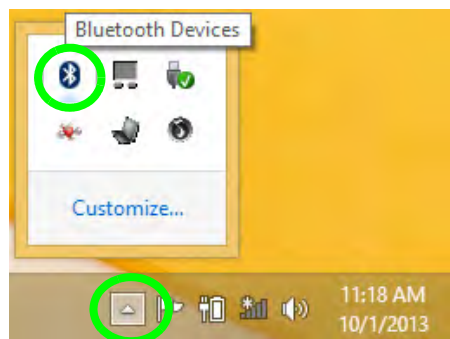
1. Switch to the Windows Desktop (click the App or use the Windows logo key  + **D** key combination).
2. Click the notification area of the taskbar and double-click the Bluetooth icon  (or click and select **Show Bluetooth Devices**).
3. The **Bluetooth** item in **PC and Devices** will appear.

OR

Charms Bar

1. Go to the **Charms Bar**.
2. Select **Settings** and then click **Change PC Settings**.
3. Select the **Bluetooth** item in **PC and Devices**.

Figure 7 - 13
Bluetooth Taskbar Icon & Change PC Settings (Charms Bar -Settings)



4. Make sure that Bluetooth is turned on and a list of discovered devices will appear.
5. Double-click the device you want to pair with the computer and click **Pair**.

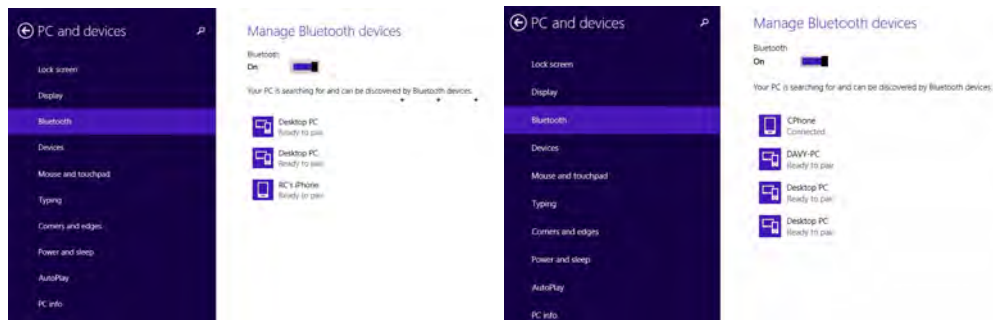


Figure 7 - 14
PC and Devices - Bluetooth

6. On first connection the computer will provide you with a pairing code to be entered onto the device.

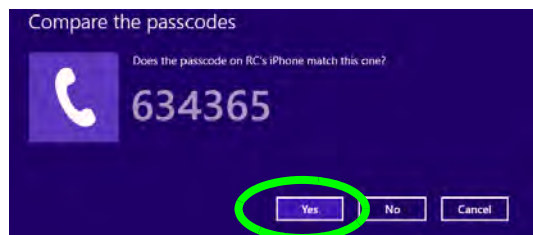




Figure 7 - 15
Enter the Passcode

7. Enter the code into your Bluetooth enabled device and click **Yes** on the computer to complete the pairing.
8. Select a device and click **Remove Device** to disconnect from any device.

To Make your Computer Discoverable to Bluetooth Devices

1. Switch to the Windows Desktop (click the app or use the Windows logo key  + **D** key combination).
2. Click the notification area of the taskbar, click the Bluetooth icon  and click **Open Settings**.
3. Click **Options**, and make sure that **Allow Bluetooth devices to find this computer** check box (**Discovery**) has a tick inside it.
4. Make sure that the **Alert me when a new Bluetooth device wants to connect** check box (**Connections**) has a tick inside it, if you want to be notified when a Bluetooth device wants to connect.

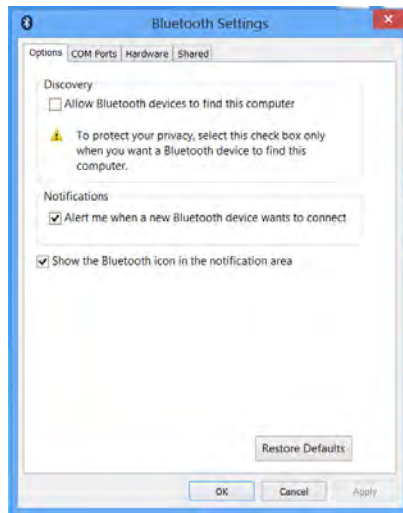


Figure 7 - 16
Bluetooth Settings

Trusted Platform (Security) Module

The **TPM security chip** allows you to create and manage digital certificates for user and platform authentication. This type of security is usually administered within large enterprises and organizations, and therefore requires implementation by a system administrator before users can access security features.

Individual users can use the TPM as an authentication with the fingerprint reader.

Make sure you have administrator's rights to your computer, and have a *Windows* password enabled for full security protection. In addition **Make sure you prepare a removable media (e.g. a USB flash drive) to store passwords etc. before beginning the TPM initialization process.**

Before setting up the TPM functions you must initialize the security platform.

Enabling & Activating TPM

1. Restart the computer.
2. Enter the **Aptio Setup Utility** pressing **F2** during the POST/startup.
3. Use the arrow keys to select the **Security** menu.
4. Select **Configuration** and press Enter to access the sub-menu.
5. Press Enter to access the **Security Device Support** menu and select **Enable** to display the full **TPM configuration** menu.
6. Select **TPM State**, press Enter and select **Enabled** to change the TPM state to enabled. You will then need to press **F4** to save the changes and restart the computer.



Figure 7 - 17
TPM State
(Enabled)

7. As the computer restarts press **F2** to enter the BIOS again and go to the **TPM Configuration** menu.

8. Select **Pending operation**, press Enter and select the option you require (if you are initializing TPM you should select **Enable Take Ownership**). You will then need to press **F4** to save the changes and restart the computer.

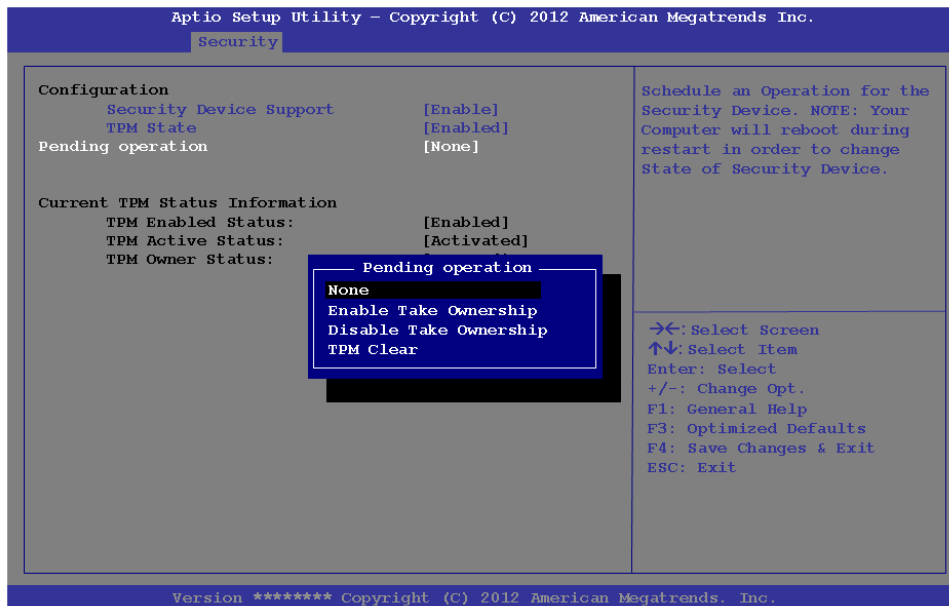


Figure 7 - 18
Pending operation
(Enable Take Ownership)

9. You can now **install the TPM driver** (see ***“Trusted Platform Module (TPM) Driver Installation” on page 7 - 24***) and then initialize the TPM.

Trusted Platform Module (TPM) Driver Installation

1. Make sure you have enabled and activated the TPM in the BIOS before installing the driver.
2. Insert the *Device Drivers & Utilities + User's Manual* disc into the DVD drive.
3. Click/tap **Option Drivers** (button).
4. Click/tap **3.Install TPM Driver > Yes**.
5. Click/tap **Next**.
6. Click/tap the button to accept the license and click/tap **Next**.
7. Click/tap **Next > Next > Install**.
8. Click/tap **Finish > Yes** to restart the computer.

Initializing TPM



1. Switch to the Desktop app and click the TPM icon right-click the icon  in the notification area of the taskbar, and select **Security Platform Initialization** (or click the **Security Platform State** taskbar bubble).
2. Click **User Settings** (tab) and click **Yes**, or right-click the icon  in the notification area of the taskbar, and select **Security Platform Initialization** (or click the **Security Platform State** taskbar bubble).
3. The **Quick Initialization** method will automatically be selected for you (if you need to use advanced settings provided by your network administrator then select **Advanced Initialization**).
4. You will need to use a removable media (e.g. a USB Flash Drive) to store passwords and data (keep the media in a safe place until required).
5. Select the drive you want to use from the drop-down menu and click **Next**.




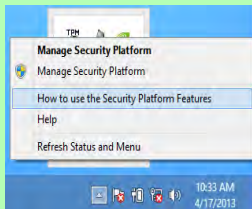
Figure 7 - 19
**Security Platform
Quick Initialization
Wizard**

Modules & Options



Help

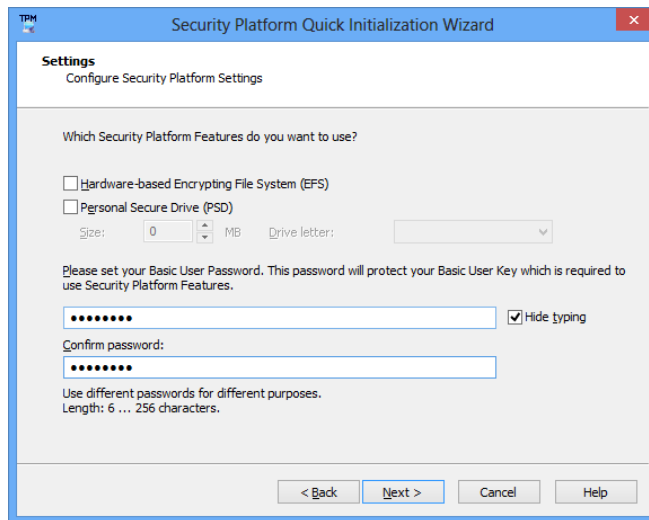
Right-click the icon  in the notification area of the taskbar to bring up the menu to select **Help** or **How to use the Security Platform Features**.





You can also click the **Help** button in any of the Infineon Security Platform Settings Tool tabs to bring up specific help topics on each tab.

Figure 7 - 20
Settings

6. Choose the **Security Platform Features** you want to use by clicking the appropriate tickbox.
7. Enter a **Basic User Password** (and re-type to confirm it) and click **Next**.



8. Click **Next** to confirm the settings.
9. The computer will then initialize the settings.
10. Click **Finish**.
11. Click the tabs and control panels to adjust the settings.
12. Double-click the icon  in the taskbar notification area to access the **Infineon Security Platform Settings Tool**, or right-click the icon  and select a menu item.

Infineon Security Platform Settings Tool

The Infineon Security Platform Settings Tool allows you to manage and check the TPM state, manage your password information, and to backup and restore the TPM data. As TPM is usually administered within large enterprises and organizations, your system administrator will need to assist you in managing the information here.



Menus

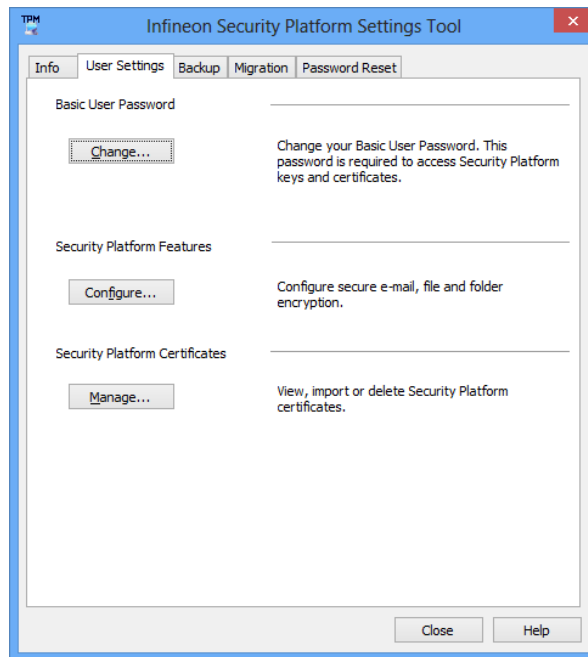
Note that not all the menus pictured here will be available for access. The menu items that appear will be dependent on your configuration settings etc. (see the **Help** file for full details).

Figure 7 - 21
**Infineon Security
Platform Settings
Tool**

User Settings

This page allows the settings to be configured for the currently logged in Infineon Security Platform user including the ability to change the password, configure secure e-mail, file and folder encryption and Enhanced Authentication. You can also import or delete certificates protected by the security platform.

Figure 7 - 22
**Infineon Security
Platform Settings
Tool (User Settings)**



Backup

Here you can configure backup and restore operations. Backup files contain the computer identification and user identification information which is used to match the machine name and user name with the current machine and user during restoration.

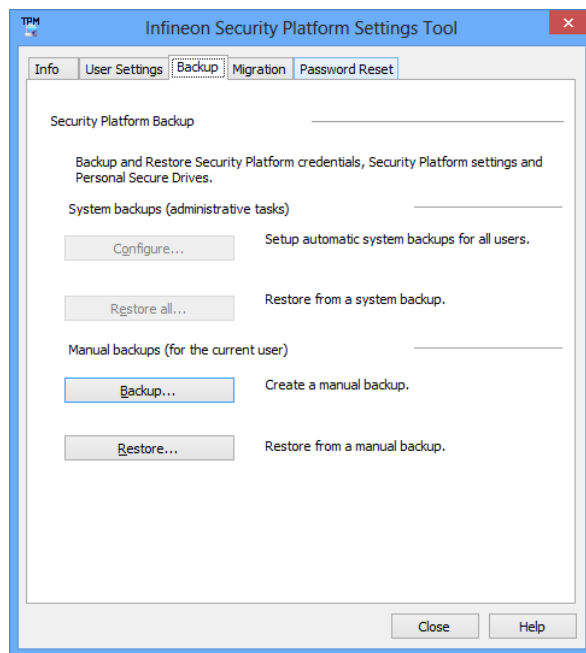
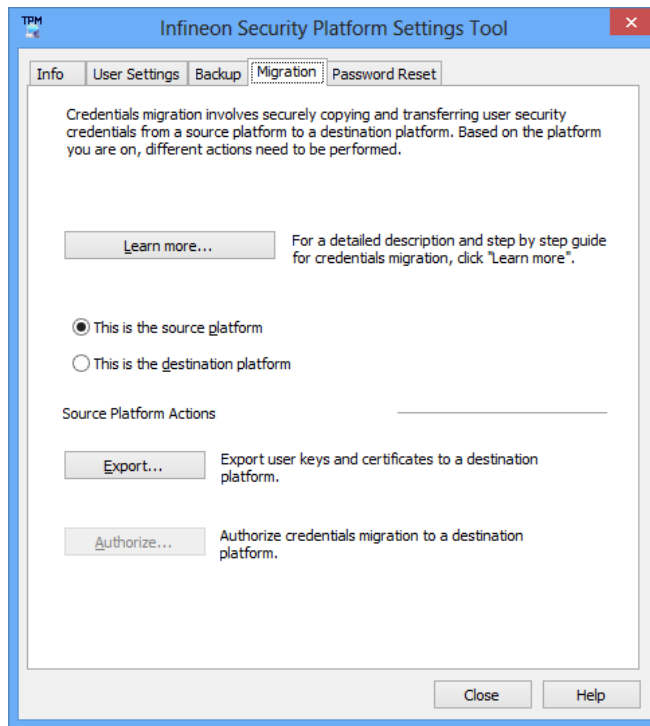


Figure 7 - 23
**Infineon Security
Platform Settings
Tool (Backup)**

Migration

The Migration tab is used to help securely transfer keys and certificates from one platform to another.

Figure 7 - 24
Infineon Security Platform Settings Tool (Migration)



Password Reset

Use Password Reset to reset basic user passwords when required.

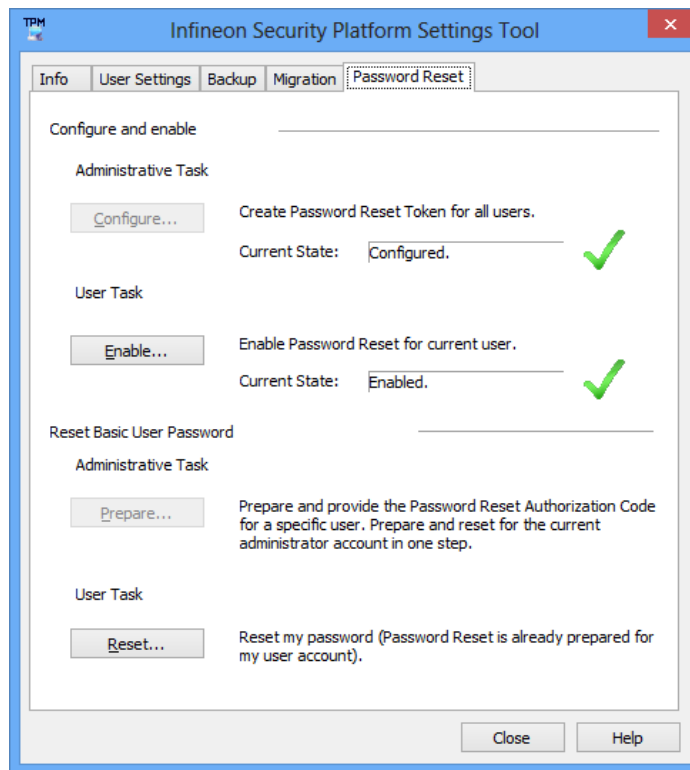
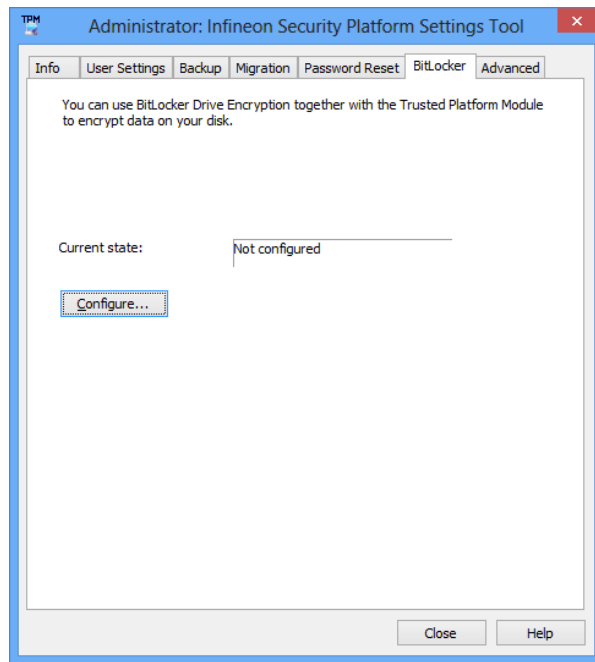


Figure 7 - 25
**Infineon Security
Platform Settings
Tool
(Password Reset)**

BitLocker

BitLocker Drive Encryption can be used in conjunction with the TPM to encrypt data on the disk and is done via the **Microsoft BitLocker Control Panel Applet**. Click **Configure** and select a drive to be encrypted and then follow the Wizard to begin the encryption process.

Figure 7 - 26
**Infineon Security
Platform Settings
Tool
(BitLocker)**



Access the Microsoft **BitLocker Drive Encryption** control panel applet from the **Windows** control panel (**System and Security**).

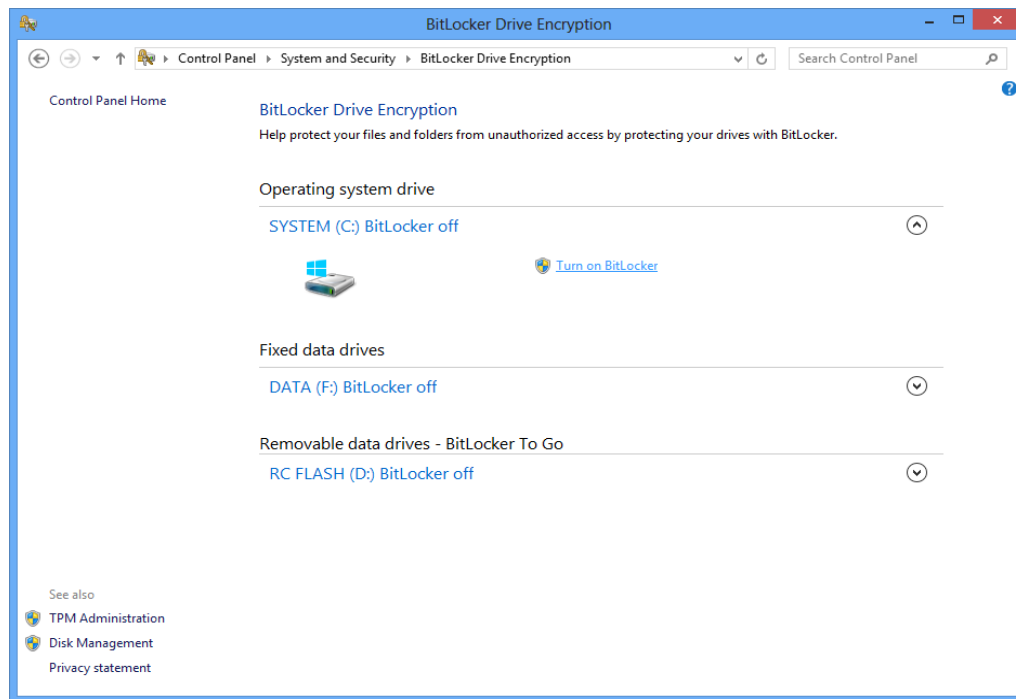
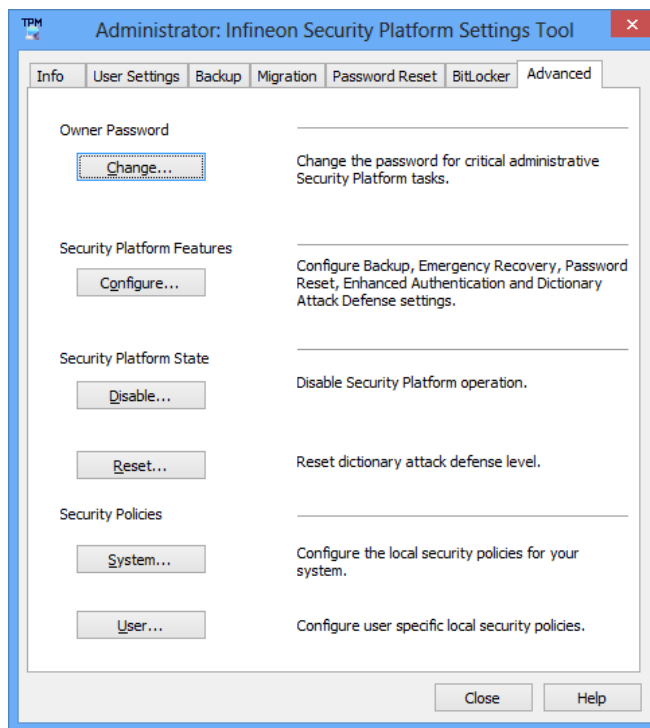


Figure 7 - 27
BitLocker Drive Encryption

Advanced

Configure all the Security Platform owner and policy settings from the Advanced tab. The settings that can be changed are for the local computer only.

Figure 7 - 28
**Infineon Security
Platform Settings
Tool
(Advanced)**



Wireless Display

Wireless Display uses your Wireless LAN module/WLAN Bluetooth Combo module (you need to make sure that your video adapter/display device is compatible with your particular WLAN/Combo module) in conjunction with a compatible video adapter/display device (purchased separately) to allow you to display the contents of the notebook display on another display (e.g. HDTV), without the need to have cables stretching across a room.

You can use the wireless display to play games, browse the internet, display videos or photo slide shows on your TV/external display without using HDMI or A/V cables.

Before configuring Wireless Display you will need to set up your compatible adapter with your display/speakers. Connect the adapter using an HDMI or A/V cable and turn on the display (or in the case of speakers connect them to the wireless speaker adapter with the cables provided with the adapter), and then set the display to the appropriate input channel (see the documentation supplied with your compatible adapter/display for full details).

Note that no driver or application is required for wireless display in Windows 8.1.



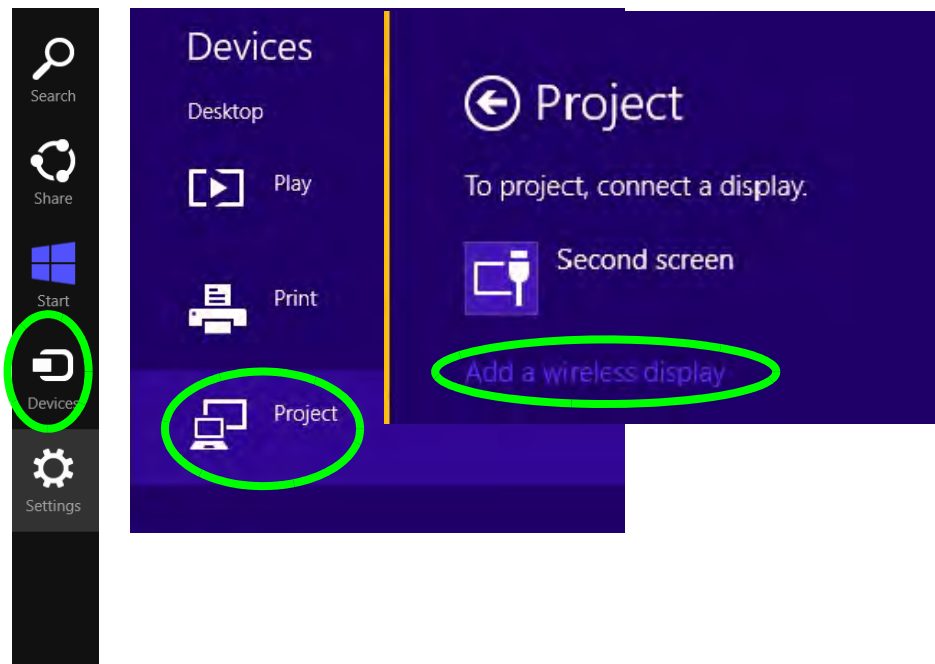
Compatible Adapters

For a list of compatible display and audio adapters check the Intel website, or your distributor/supplier.

Wireless Display Configuration

1. Note that no driver or application is required for wireless display in **Windows 8.1**.
2. Go the **Charms Bar**, select **Devices**.
3. Click **Project**.
4. Click **Add a wireless display**.

Figure 7 - 29
Add a Wireless Display



- The system will then search for compatible display devices (**this may take up to 60 seconds** so allow time for this to complete).

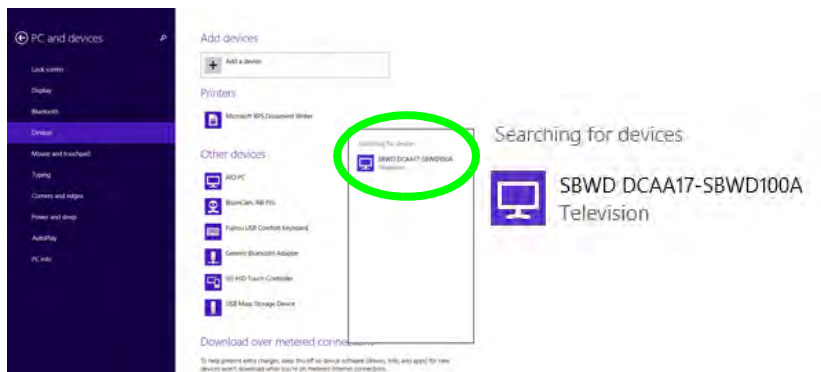


Figure 7 - 30
Searching For Devices

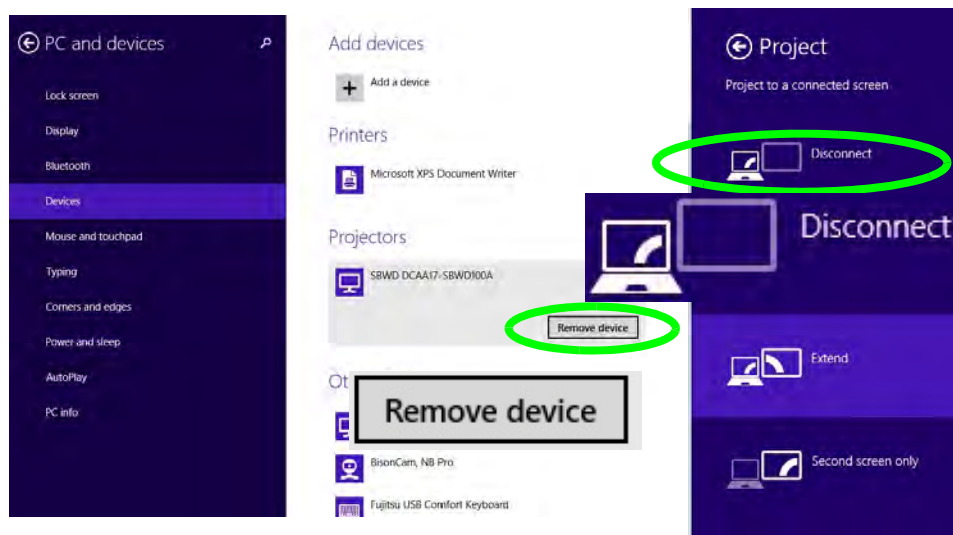
- Double-click any detected display device in the list.
- You may then need to input a pin number for the device to which you are connecting.
- Click **Next**.



Figure 7 - 31
Enter PIN

- The display will then connect (for specific settings for your display see the documentation supplied with your compatible adapter/display for full details).
- To disconnect from the display you can select it in **PC and Devices > Devices** and click **Remove Device > Yes**; or go to the **Project** menu (Charms Bar > Devices) and click **Disconnect**.

Figure 7 - 32
**Remove Device/
Disconnect**



Chapter 8: Troubleshooting

Overview

Should you have any problems with your computer, before consulting your service representative, you may want to try to solve the problem yourself. This chapter lists some common problems and their possible solutions. This can't anticipate every problem, but you should check here before you panic. If you don't find the answer in these pages, make sure you have followed the instructions carefully and observed the safety precautions in the preface. If all else fails, talk to your service representative. You should also make a record of what happened and what remedies you tried.

Of course, if something goes wrong, it will happen at the most inconvenient time possible, so you should preview this section just in case. If, after you've tried everything, and the system still won't cooperate, try turning it off for a few minutes and then rebooting. You will lose any unsaved data, but it may start working again. Then call your service representative.

Basic Hints and Tips

Many of the following may seem obvious but they are often the solution to a problem when your computer appears not to be working.

- **Power** - Is the computer actually plugged into a working electrical outlet? If plugged into a **power strip**, make sure it is actually working. Check the **LED Power & Communication Indicators** (see “*Buttons & LED Indicators*” on page 1 - 10) to see the computer’s power status.
- **Connections** - Check all the **cables** to make sure that there are no **loose connections** anywhere.
- **Power Savings** - Make sure that the system is not in **Hibernate** or **Sleep** mode by pressing the keys configured in your *Power Options*, or power button, to wake-up the system.
- **Brightness** - Check the brightness of the screen by pressing the brightness buttons to adjust the brightness.
- **Display Choice** - Make sure the system is not set to “external only” display if an external display is attached.
- **Boot Drive** - Make sure there are no **optical media and/or USB storage devices** in any connected drive when you start up your machine.

Backup and General Maintenance

- Always **backup** your important data, and keep copies of your OS and programs safe, but close to hand. Don't forget to note the **serial numbers** if you are storing them out of their original cases, e.g. in a CD wallet.
- Run **maintenance programs** on your hard disk and OS as often as you can. You may schedule these programs to run at times when you are not using your computer. You can use those that are provided free with your OS, or buy the more powerful dedicated programs to do so.
- Write down your passwords and keep them safe (away from your computer). This is especially important if you choose to use a **Supervisor** password for the BIOS (see *[“Security Menu” on page 5 - 9](#)*).
- Keep copies of vital **settings files** such as network, dialup settings, mail settings etc.(even if just brief notes).



Warranty

The CPU is not a user serviceable part. Accessing the CPU in any way, may violate your warranty.

Viruses

- Install an **Anti-Virus** program and keep the **definitions file** (the file which tells your program which viruses to look for) up to date. New computer viruses are discovered daily, and some of them may seriously harm your computer and cause you to lose data. **Anti-Virus** programs are commercially available and the **definitions file updates** are usually downloadable directly from the internet.
- Be careful when opening e-mail from sources you don't know. **Viruses** are often triggered from within **e-mail attachments** so take care when opening any attached file. You can configure most **Anti-Virus** programs to check all **e-mail attachments**. **Note:** You should also beware of files from people you know as the virus may have infected an **address book** and been automatically forwarded without the person's knowledge.
- Keep a “**Bootable CD-ROM/DVD-ROM/USB storage device**” (this CD/DVD/USB device provides basic information which allows you to startup your computer) handy. You may refer to your OS's documentation for instructions on how to make one, and many **Anti-Virus** programs will also provide such a disk (or at least instructions on how to make one).


Upgrading and Adding New Hardware/Software

- Do not be tempted to make changes to your **Windows Registry** unless you are very sure of what you are doing, otherwise you will risk severely damaging your system.
- Don't open your computer or undertake any repair or upgrade work if you are not comfortable with what you are doing.
- Read the **documentation**. We can assume, since you are reading this that you are looking at the computer's manual, but what about any new peripheral devices you have just purchased? Many problems are caused by the installation of new hardware and/or software. Always refer to the documentation of any new hardware and/or software, and pay particular attention to files entitled "**READ ME**" or "**READ ME FIRST**".
- When installing a new device always make sure the device is powered on, and in many cases you will need to restart the computer. Always check that all the cables are correctly connected.
- Make sure you have installed the **drivers** for any new hardware you have installed (latest **driver files** are usually available to download from vendor's websites).


Troubleshooting


- Thoroughly check any **recent changes** you made to your system as these changes may affect one or more system components, or software programs. If possible, go back and undo the change you just made and see if the problem still occurs.
- Don't over complicate things. The less you have to deal with then the easier the source of the problem may be found; **Example** - if your computer has many devices plugged into its ports, and a number of programs running, then it will be difficult to determine the cause of a problem. Try disconnecting all of the devices and restarting the computer with all the peripheral devices unplugged. A process of elimination (adding and removing devices and restarting where necessary) will often find the source of a problem, although this may be time consuming.

Problems & Possible Solutions

Problem	Possible Cause - Solution
The Battery LED power indicator  , is blinking orange.	<i>Low Battery.</i> Plug in the AC power source. If the computer doesn't start up immediately, turn it off then on again.
You are losing battery power too quickly.	<i>The system is using too much power.</i> If your OS has a <i>Power Options</i> scheme (see “Power Plans” on page 3 - 4) check its settings. You may also be using an ExpressCard device/USB device/external device that is drawing a lot of power.
Actual battery operating time is shorter than expected.	<i>The battery has not been fully discharged before being recharged.</i> Make sure the battery is fully discharged and recharge it completely before reusing. Check the settings of any active power plan (see “Power Plans” on page 3 - 4). <i>A peripheral device/USB device is consuming a lot of power.</i> Turn off/remove the unused device to save power.
The computer feels too hot.	Make sure the computer is properly ventilated and the Vent/Fan intakes are not blocked. If this doesn't cool it down, put the system into Hibernate mode or turn it off for an hour. Make sure the computer isn't sitting on a thermal surface. Make sure you're using the correct adapter.

Troubleshooting

Problem	Possible Cause - Solution
Nothing appears on screen.	<p><i>The system is in a power saving mode.</i> Press the power button or any configured sleep/resume key combination.</p> <p><i>The screen controls need to be adjusted.</i> Press the brightness buttons to adjust the settings. If you're connected to an external monitor, make sure it's plugged in and turned on. You should also check any attached monitor's own brightness and contrast controls.</p> <p><i>The screen saver is activated.</i> Press any key on the keyboard.</p>
No image appears on the external monitor I have plugged in and powered on.	<i>You haven't installed the video driver and configured it appropriately from the Control Panel.</i> See for instructions on installing and configuring the video driver.
No image appears on the screen after I have plugged-in an HDMI device in to the HDMI-In port.	<i>You haven't pressed the Mode Toggle Button.</i> Press and hold the mode toggle button  to switch between the computer and HDMI input modes. When the HDMI input source is displayed you can use any HDMI device plugged in to the computer's HDMI-In port. A quick press of the button will toggle the display on/off (see Table 1 - 3, on page 1 - 14).
The sound cannot be heard or the volume is very low.	<i>The volume might be set too low.</i> Check the volume control in the Settings menu in the Charms Bar in Windows (see "Audio Features" on page 2 - 8).
The DVD-ROM cannot be read.	<i>The DVD-ROM is dirty.</i> Clean it with a DVD-ROM cleaner kit.

Problem	Possible Cause - Solution
The Optical Disk Drive tray will not open when there is a disc in the tray.	<i>The compact disc is not correctly placed in the tray. Gently try to remove the disc using the eject hole (see “Loading Discs” on page 2 - 3).</i>
The DVD regional codes can no longer be changed.	<i>The code has been changed the maximum 5 times. See “DVD Regional Codes” on page 2 - 5.</i>
The DVD will not play.	<i>The computer is tilted beyond 50 degrees. Note that although the computer may be tilted up to an angle of 50 degrees from the vertical position, the DVD-ROM drive will only work (i.e continue to spin and read DVDs) up until an angle of around 35 degrees from the vertical position. See “DVD Operation” on page 1 - 9.</i>
You forget the boot password.	<i>If you forget the password, you may have to discharge the battery of the CMOS. Contact your service representative for help.</i>
<div>  <p>Password Warning</p> <p>If you choose to set a boot password, NEVER forget your password. The consequences of this could be serious. If you cannot remember your boot password you must contact your vendor and you may lose all of the information on your hard disk.</p> </div>	

Troubleshooting

Problem	Possible Cause - Solution
The Wireless LAN/Bluetooth/PC Camera modules cannot be configured.	<i>The driver(s) for the module(s) have not been installed. Make sure you have installed the driver for the appropriate module (see the instructions in Chapter 7 “Modules & Options” for the appropriate module).</i>
A file cannot be copied to/from a connected Bluetooth device.	<i>The transfer of data between the computer and a Bluetooth enabled device is supported in one direction only (simultaneous data transfer is not supported). If you are copying a file from your computer to a Bluetooth enabled device, you will not be able to copy a file from the Bluetooth enabled device to your computer until the file transfer process from the computer has been completed</i>
The Wireless LAN/Bluetooth modules cannot be detected.	<i>The modules are off as the computer is in Airplane Mode. Go to the Charms Bar and select Settings, then click the WiFi icon (it should read Available under the icon and Airplane mode should be Off).</i>

Problem	Possible Cause - Solution
<p>I have used Update Driver in Device Manager (Unknown device > Other Devices) to try and install the Airplane Mode driver. Windows encountered a problem in attempting to update the driver, and a yellow exclamation mark appears in Device Manager against the Unknown device.</p>	<p><i>It is very important that the drivers are installed in the order indicated in Chapter 4 (which is the numbered installation order on the Device Drivers & Utilities + User's Manual disc). This issue can occur when drivers are manually installed, and not in the correct order.</i></p> <p>If you have attempted to Update Driver from the Device Manager control panel and have encountered problems, then use the method below to correct this:</p> <p>To correct this problem:</p> <ol style="list-style-type: none"> 1. Go to the Programs and Features (Programs) control panel in Windows. 2. Select any installed Airplane Mode driver item (e.g. Insyde Airplane Mode HID Mini-Driver), and click Uninstall/Change to uninstall the current driver. 3. Restart the computer. 4. Insert the <i>Device Drivers & Utilities + User's Manual disc</i> and click Install Drivers (button). 5. Double-click the Airplane Driver item in the menu. 6. Follow the instructions to install the correct driver (you will need to restart the computer as part of the installation process).

Troubleshooting

Problem	Possible Cause - Solution
I have connected a Bluetooth Mouse but it loses the Bluetooth connection and no longer responds after a short period of inactivity.	<p><i>This is an issue with this mouse model and the Intel Wireless 7260 WLAN and Bluetooth combo module series. To resolve this issue do the following:</i></p> <ol style="list-style-type: none"> 1. Go to the Device Manager control panel in Windows. 2. Click the arrow alongside Bluetooth to expand the menu if required. 3. Double-click Intel(R) Wireless Bluetooth(R) 4.0 + HS Adapter. 4. Click the Power Management tab. 5. Make sure that the tickbox alongside “allow the computer to turn off this device to save power” doesn’t have a tick alongside it. 6. Click OK and close the control panel.

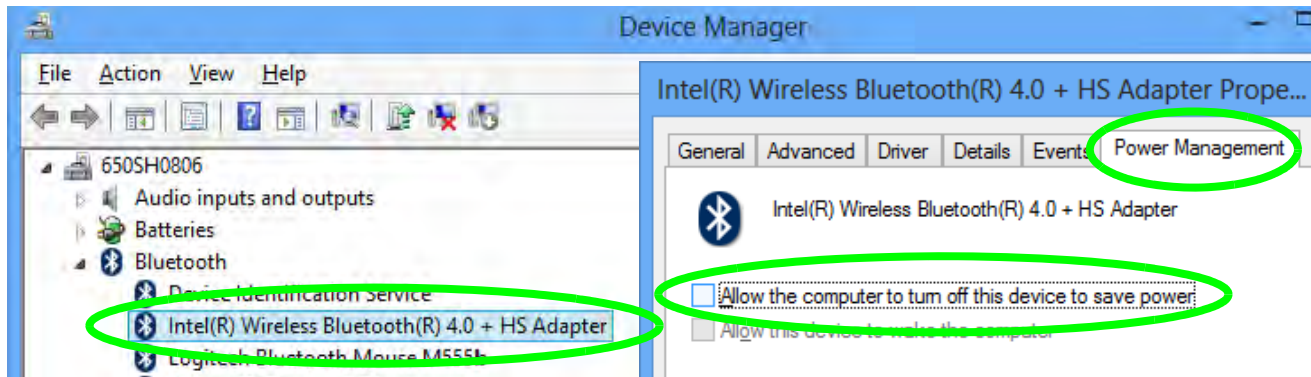


Figure 8 - 1 - Device Manager (Bluetooth)


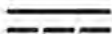



Problem	Possible Cause - Solution
When using a Bluetooth headset the audio appears to be mono and not stereo.	<p><i>This is a common issue with Bluetooth headsets. To resolve this issue do the following (you will need to repeat this procedure after every boot up, restart, or when the system resumes from hibernation):</i></p> <ol style="list-style-type: none"> 1. Go to the Devices & Printers control panel in Windows. 2. Double-click the Bluetooth headset. 3. Click Connect to complete the stereo connection. <p>OR</p> <ol style="list-style-type: none"> 1. Go to the Sound control panel in Windows. 2. Right-click (in the Playback tab) the Bluetooth Stereo Audio device (the default device is Headset). 3. Click Connect to complete the stereo connection.






Appendix A: Interface (Ports & Jacks)

Overview





The following chapter will give a quick description of the interface (ports & jacks) which allow your computer to communicate with external devices, connect to the internet etc.

Computer Ports and Jacks

Item	Description
Card Reader Port 	The card reader allows you to use some of the latest digital storage cards. Push the card into the slot and it will appear as a removable device.
DC-In Jack 	Plug the supplied AC/DC adapter into this jack to power your computer.
External Monitor (VGA) Port 	This port allows you to connect an external monitor, or Flat Panel Display, to get dual video or simultaneous display on the LCD and external monitor/FPD.
HDMI-In Port 	The HDMI-In (High-Definition Multimedia Interface) port allows you to display external sources such as Blu-ray players, DVDs, set top boxes and games consoles etc. on your computer screen as long as the computer's AD/DC adapter is plugged in to a power source (see “HDMI-In Port” on page 1 - 12).
HDMI-Out Port 	The HDMI-Out (High-Definition Multimedia Interface) port is an audio/video connector interface for transmitting uncompressed digital streams. This allows you to connect an external monitor, TV or Flat Panel Display etc. as a display device by means of a HDMI cable. Note that HDMI carries both audio and video signals.

Item	Description
Headphone-Out Jack 	Headphones or speakers may be connected through this jack. Note: Set your system's volume to a reduced level before connecting to this jack.
Microphone-In Jack 	Plug an external microphone in to this jack to record on your computer.
PS/2 Type Keyboard & Mouse Ports 	Connect an external PS/2 type mouse or keyboard to these ports. <div>  Port Warning The computer can only accept one keyboard at a time. Don't try to install a USB and a PS/2 keyboard at the same time. Doing so may cause resource conflicts and make the system unstable. </div>
RJ-45 LAN Jack 	This port supports LAN (Network) functions. Note: Broadband (e.g. ADSL) modems usually connect to the LAN port.

Interface (Ports & Jacks)

Item	Description
RS-232 COM/Serial Ports 	The RS-232 COM/serial is a communication interface for data transfer, through which information transfers in or out one bit at a time. This port can be used to connect the computer to devices such as terminals and peripherals.
Security Lock Slot 	To prevent possible theft, a Kensington-type lock can be attached to this slot. Locks can be purchased at any computer store.
USB 2.0/1.1 Ports  USB 3.0 Port 	<p>These USB (Universal Serial Bus) 2.0 compatible ports (USB 2.0 is fully USB 1.1 compliant) are for low-speed peripherals such as keyboards, mice or scanners, and for high-speed peripherals such as external HDDs, digital video cameras or high-speed scanners etc. Devices can be plugged into the computer, and unplugged from the computer, without the need to turn the system off (if the power rating of your USB device is 500mA or above, make sure you use the power supply which comes with the device).</p> <p>The USB 3.0 port is denoted by its blue color; USB 2.0 ports are colored black. USB 3.0 will transfer data much faster than USB 2.0, and is backwards-compatible with USB 2.0.</p>

A

Appendix B: Intel Video Driver Controls

The basic settings for configuring the LCD are outlined in “*Video Features*” on *page 1 - 35*.

Intel Video Driver Installation

Make sure you install all the drivers in the order indicated in *Table 4 - 1, on page 4 - 4*.

Video

1. Insert the *Device Drivers & Utilities + User's Manual* disc into the CD/DVD drive.
2. Click/tap **2.Install VGA Driver > Yes**.
3. Click/tap **Next > Yes > Next > Next**.
4. Click/tap **Finish** to restart the computer.

Dynamic Video Memory Technology

Intel® DVMT automatically and dynamically allocates as much system memory (RAM) as needed (up to **1.7GB**) to the video system (**the video driver must be installed**). DVMT returns whatever memory is no longer needed to the operating system.



DVMT Notes

DVMT is not local video memory.

DVMT is not user-configurable.

DVMT will not function in MS-DOS. DOS uses the legacy memory indicated.



HDMI-In Port

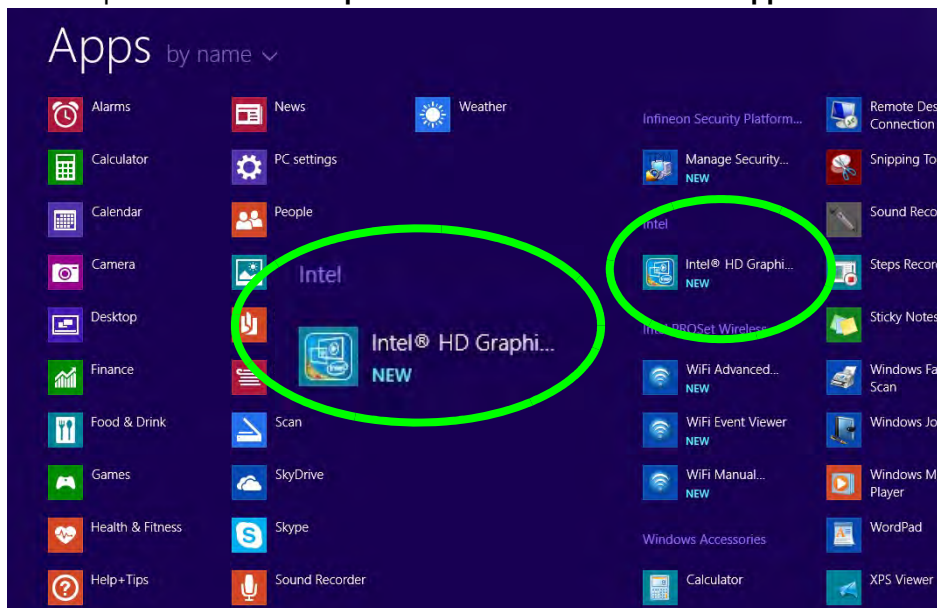
This computer features an **HDMI** (High-Definition Multimedia Interface) **input port** that allows you to display external sources such as Blu-ray players, DVDs, set top boxes and games consoles etc. on your computer screen.

Note that this is an HDMI Input port and cannot be used as an HDMI Output port to display the computer's screen on external displays (see page 1 - 12).

Intel® HD Graphics Control Panel

Advanced video configuration options are provided by the **Intel® HD Graphics Control Panel**. To access the control panel see below and overleaf:

1. Click/tap the **Intel® HD Graphics Control Panel** icon in the **Apps** screen.



(see over)

Figure B - 1

Intel® HD Graphics Control Panel

OR

2. Right-click the **Desktop** and select **Graphics Properties** from the menu.

OR

3. Click **Advanced settings** in the **Screen Resolution** control panel in **Windows**.
4. Click the **Intel(R) HD Graphics Control Panel** tab and click **Graphics Properties** (button).
5. Double-click the **Intel(R) HD Graphics** control panel in the **Windows Control Panel**.

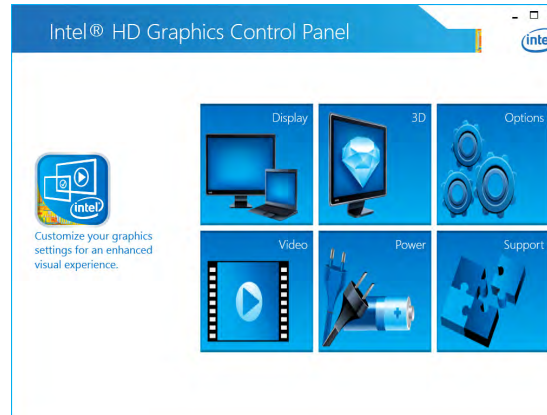
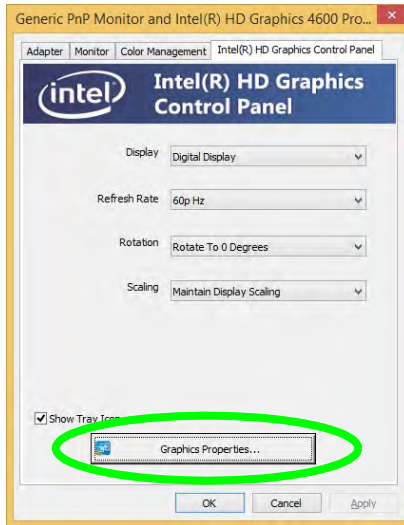


Figure B - 2
**Intel® HD Graphics
Control Panel**

Intel Video Driver Controls

You may make changes to any of the graphics properties by clicking the appropriate menu panel and adjusting the settings on the right.

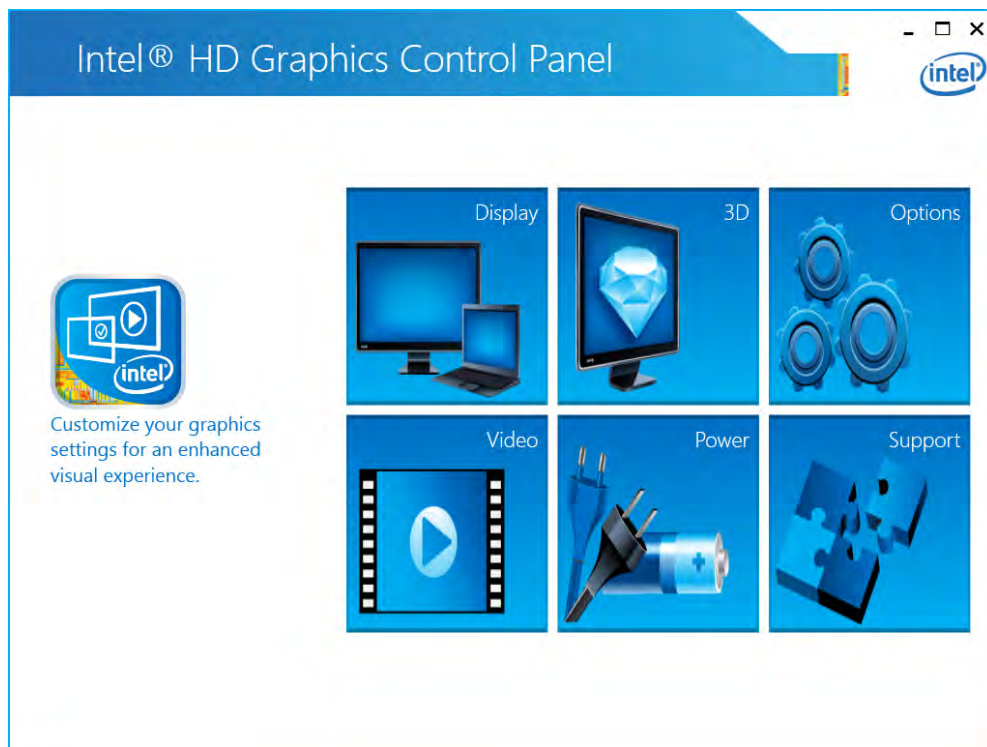



Figure B - 3
**Intel® HD Graphics
Control Panel**

Sub-Menus

Some of the menu panels will also have sub-menus (in the top left corner of the menu alongside the icon ) to display further configuration options.

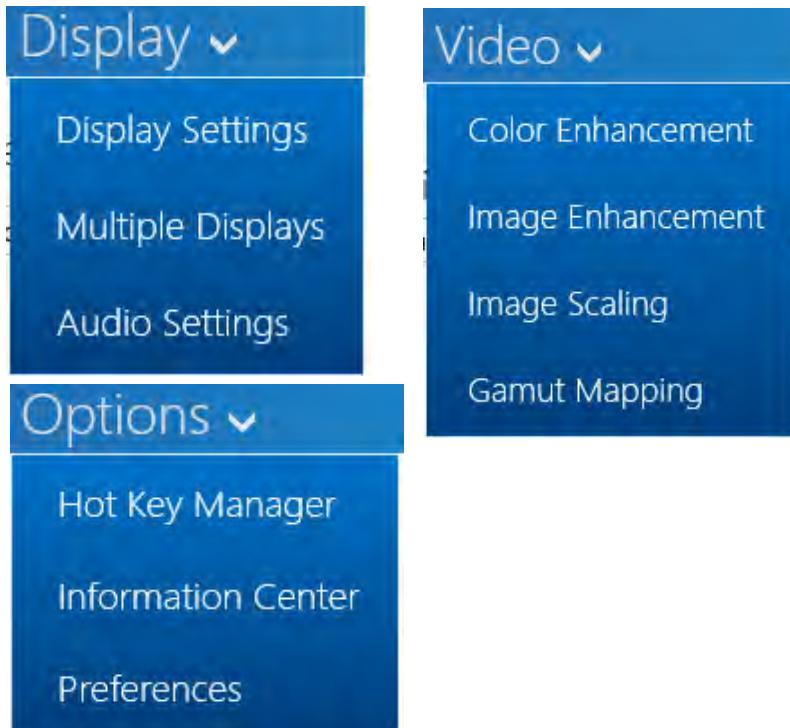


Figure B - 4
**Intel® HD Graphics
Control Panel
Sub-Menus**

Intel Video Driver Controls



Multiple Display

At least one other display must be attached in order to view multiple display selection options.

Display

Click either **Display Settings** or **Color** to make display adjustments, including configuration for any attached external displays.

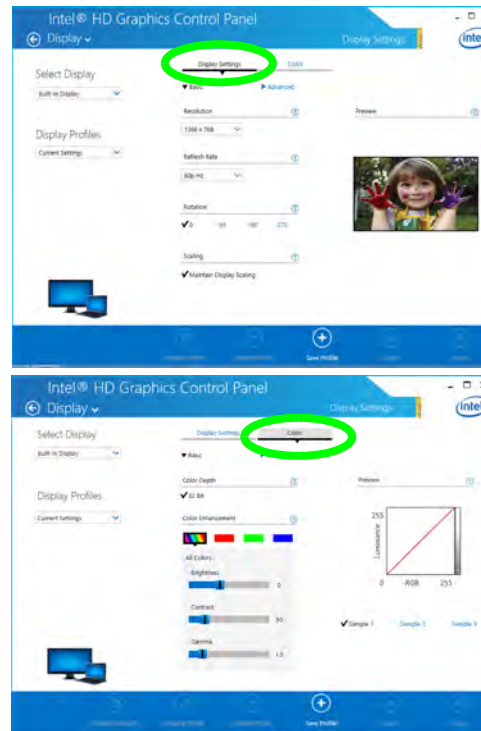
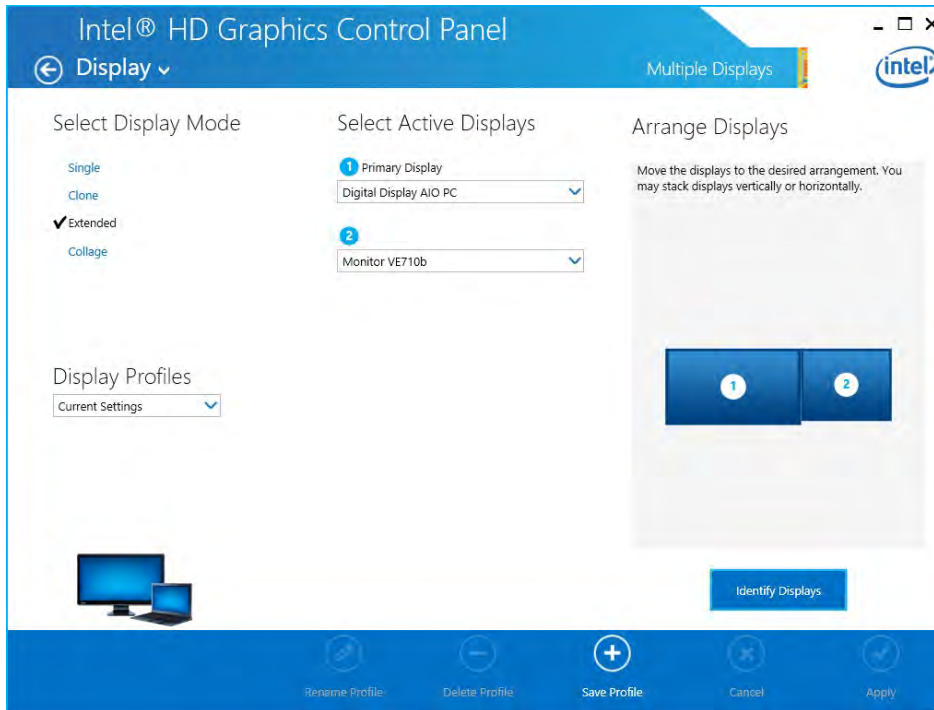


Figure B - 5

**Intel® HD Graphics
Control Panel
Display Settings**

Click the **Display** menu at the top of the screen to display the sub-menus. The **Multiple Displays** menu allows you to configure the display mode of any attached displays (see *“Attaching Other Displays” on page B - 16*).



Multiple Display

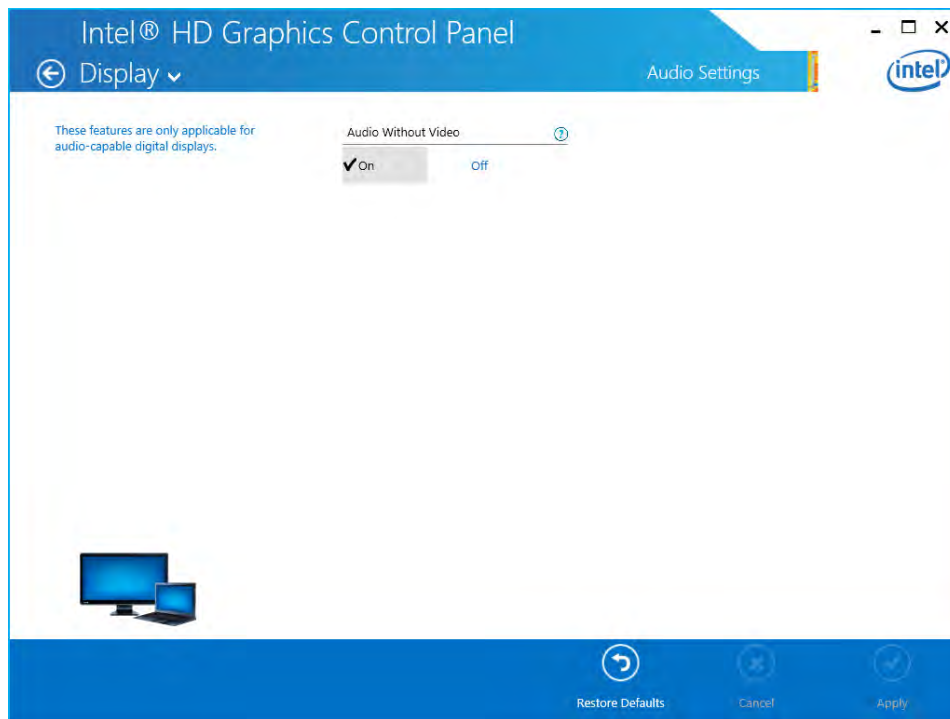
At least one other display must be attached in order to view multiple display selection options.

Figure B - 6
Intel® HD Graphics
Control Panel
Display Settings -
Multiple Displays

Intel Video Driver Controls

The **Audio** sub-menu allows you to configure the capability mode of any attached displays if applicable (i.e. the attached display supports audio).

Figure B - 7
**Intel® HD Graphics
Control Panel
Display Settings -
Audio**



B

3D

This menu allows you to choose how 3D images are displayed. **Quality** displays the most detail, **Balanced** provides better computer performance with good quality and **Custom** allows you to configure the **Anisotropic Filtering**, **Vertical Sync** and **Anti-Aliasing** features to your preferences. Click **Apply** to save changes.

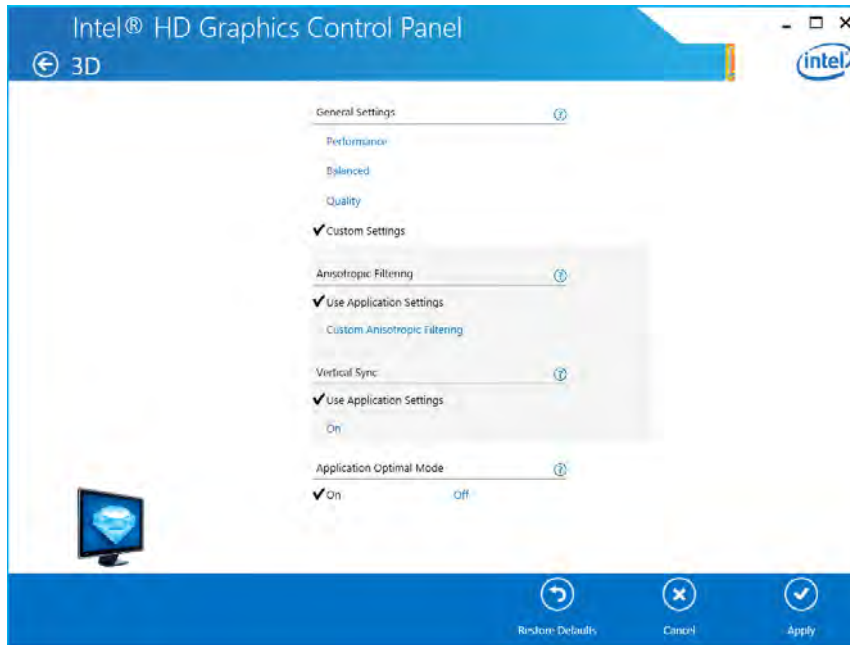


Figure B - 8
**Intel® HD Graphics
Control Panel 3D**

Intel Video Driver Controls

Options

Options allows you to **Customize Hot Keys** (for opening the application, rotating the display, scaling etc.,) to your preferences. Click **Apply** to save changes.

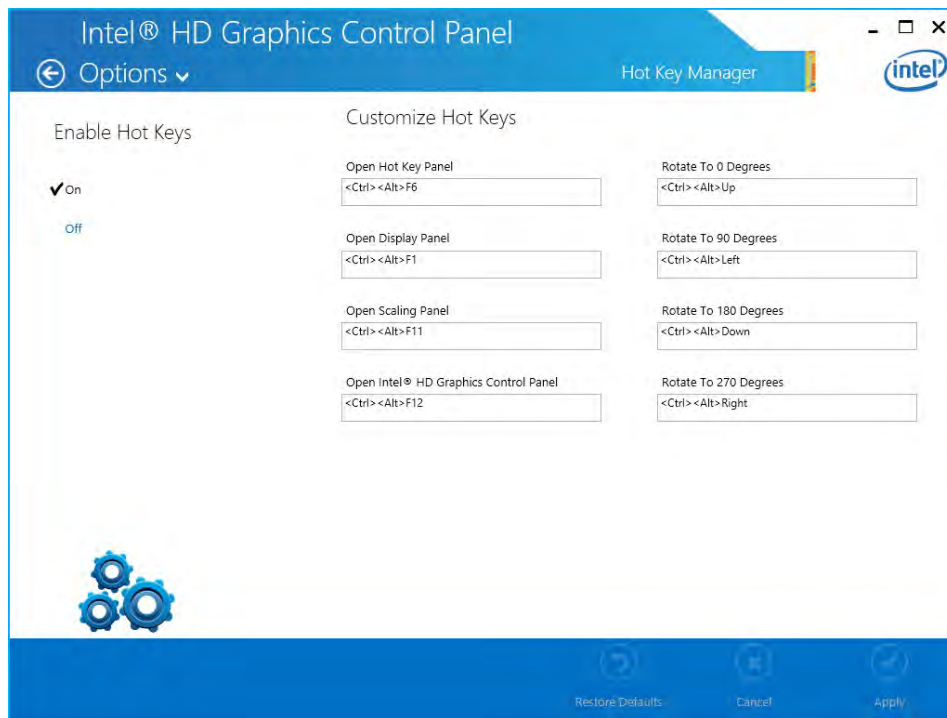
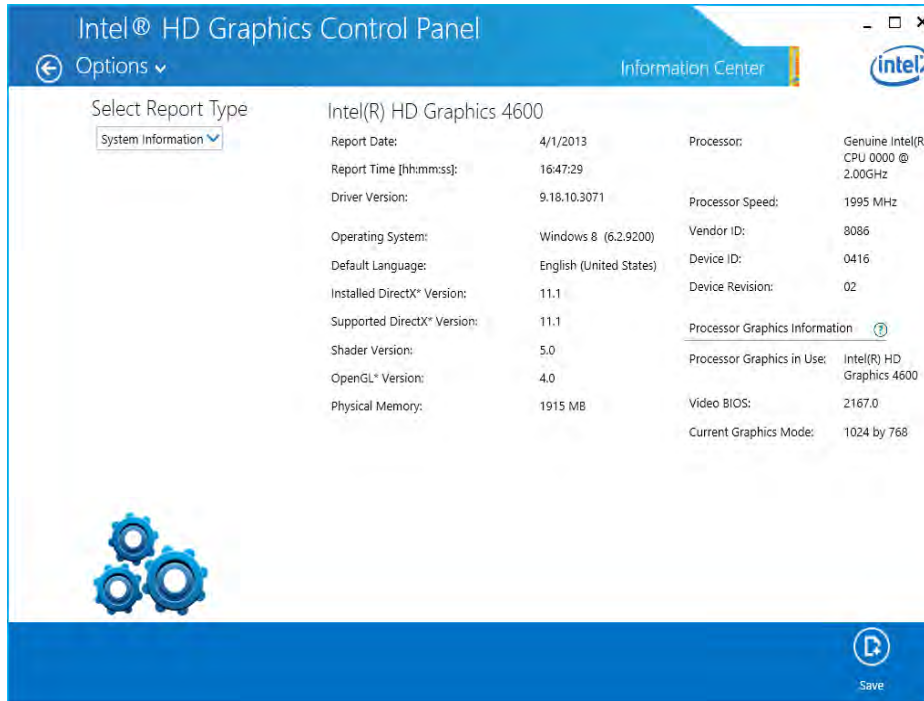


Figure B - 9

**Intel® HD Graphics
Control Panel
Options**

Click the **Options** menu at the top of the screen to display the sub-menus. The **Information Center** provides details on **System Information**, the **Built-In Display** and any **attached displays**.



Preferences

Go to the **Preferences** sub-menu in Options to configure the preferences for the Intel® HD Graphics Control Panel.

Make sure you turn Tray Icon On to display the Intel® HD Graphics Control Panel icon in the notification area of the taskbar (as below).

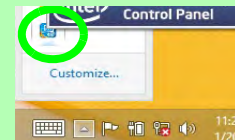
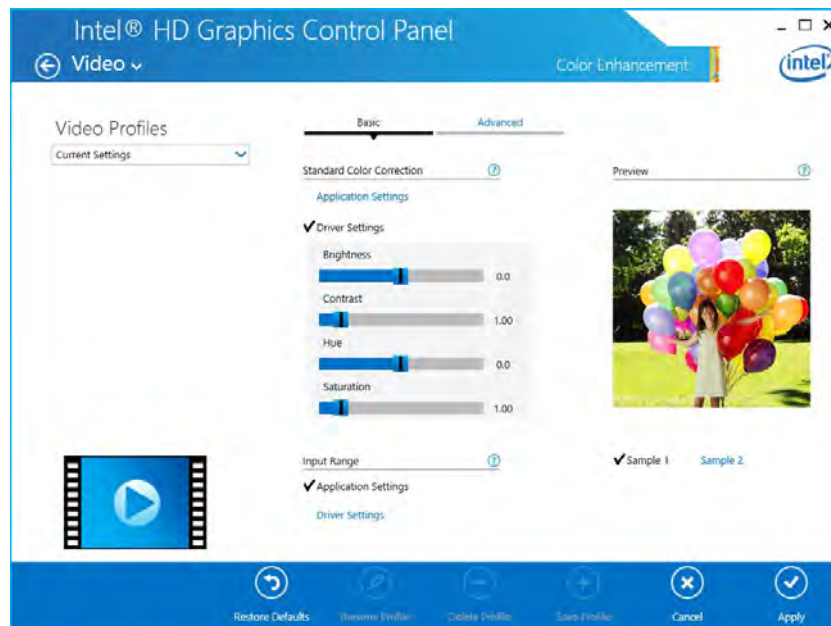


Figure B - 10
**Intel® HD Graphics
 Control Panel
 Options -
 Information Center**

Video

The **Video Profiles** menu allows you to brighten or darken movies, or to switch to vivid colors. Click **Basic** or **Advanced** to adjust the video settings. The **Preview** image will display a sample image using the current settings. You can **Save Profile** and name the Profile to recall the settings at any time. Click **Apply** to save changes.

Figure B - 11
**Intel® HD Graphics
Control Panel Video
(Basic - Driver
Settings)**



Click the **Video** menu at the top of the screen to display the sub-menus. The **Image Enhancement** menu allows you to adjust the **Sharpness** and **Skin Tone Enhancement**. Click **Apply** to save changes.

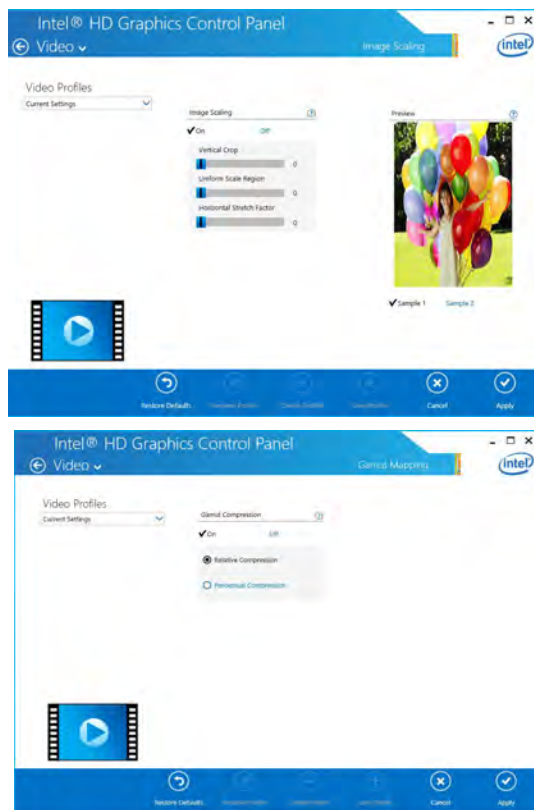


Figure B - 12
**Intel® HD Graphics
Control Panel Video
Image
Enhancement Basic**

Intel Video Driver Controls

The **Image Scaling** and **Gamut Mapping** menus allow you to adjust these items.

Figure B - 13
**Intel® HD Graphics
Control Panel Video
Image Scaling &
Gamut Mapping**



Display Devices & Options

Besides the built-in LCD you can also use external monitors/flat panel displays/TVs connected to the HDMI-Out port (High-Definition Multimedia Interface) and/or external monitor port as your display device.



Attaching Displays

When you first attach an external display you may find that the desktop does not occupy the full screen area. Use either the display’s auto adjust/configure controls, or the Intel(R) HD Graphics control panel to configure the full screen display.



Default Display Mode

The initial default display mode when first attaching an external display is set to **Extended Desktop Mode**.

You can use the Intel(R) HD Graphics control panel to adjust this setting.

Subsequent to any restart/shutdown or removal of display device, the system will retain the last mode set before the restart/shutdown or removal of display device.

Intel Display Mode	Description
Single Display	One of the connected displays is used as the display device
Clone Displays	Connected displays output the same view and may be configured independently
Extended Desktop	Connected displays are treated as separate devices, and act as a virtual desktop
Collage	A number of connected displays are combined into a single unified higher resolution for larger screen sizes

Table B - 1
Display Modes



Multiple Display

At least one other display must be attached in order to view **Multiple Display** selection options.

Attaching Other Displays

To Clone Displays:

1. Attach your external display to the external monitor port/HDMI-Out port, and turn it on.
2. Go to the **Intel(R) HD Graphics Control Panel** control panel and click **Display > Multiple Displays** (sub-menu).
3. Click **Clone** from the **Select Multiple Display Mode** menu.
4. Click **Apply**, and **OK** to confirm the settings change.
5. You can select the **displays to be used** from the **Select Active Displays** menu.

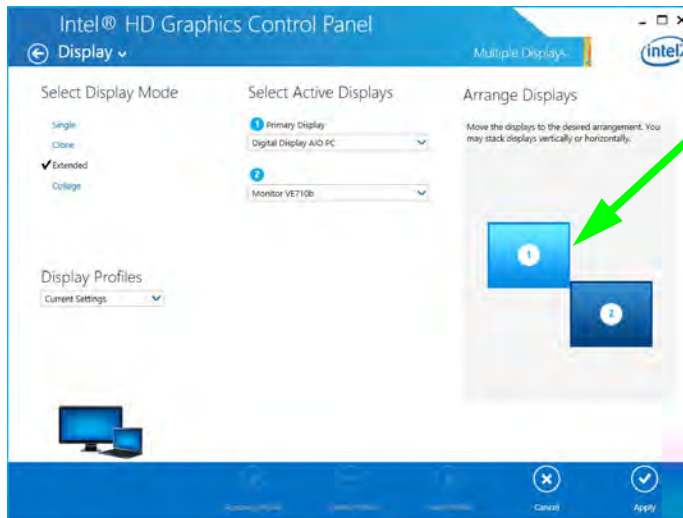


Figure B - 14

**Display > Multiple
Displays (Clone)**

To Enable Extended Mode:

1. Attach your external display to the external monitor port/HDMI-Out port, and turn it on.
2. Go to the **Intel(R) HD Graphics Control Panel** control panel and click **Display > Multiple Displays** (sub-menu).
3. Click **Extended** from the **Select Multiple Display Mode** menu.
4. Click **Apply**, and **OK** to confirm the settings change.



Click the appropriate monitor icon and drag it to match the physical arrangement you wish to use (e.g. the secondary display may be extended left/right/above/below the primary display).

Click **Display Settings** to make any adjustments required.



Display Settings Extended Desktop

You can have different Colors, Screen Area and Monitor Refresh Rates for each display device **provided your monitor can support them**.

You can drag the monitor icons to match the physical layout of your displays. Icons and programs may also be dragged between the displays.

Figure B - 15
Display > Multiple Displays (Extended)



Collage Mode

Collage mode is used to combine a number of displays into a single unified higher resolution for larger screen sizes,.

To Enable Collage Mode:

1. Attach your external displays to the external monitor port and HDMI-Out port, and turn them on.
2. Go to the **Intel(R) HD Graphics Control Panel** control panel and click **Display > Multiple Displays** (sub-menu).
3. Click **Collage** from the **Select Multiple Display Mode** menu.
4. Click **Enable Collage** and click **On**.
5. Click **Vertical** or **Horizontal** to arrange and displays as required.
6. Click **Apply**, and **OK** to confirm the settings change.



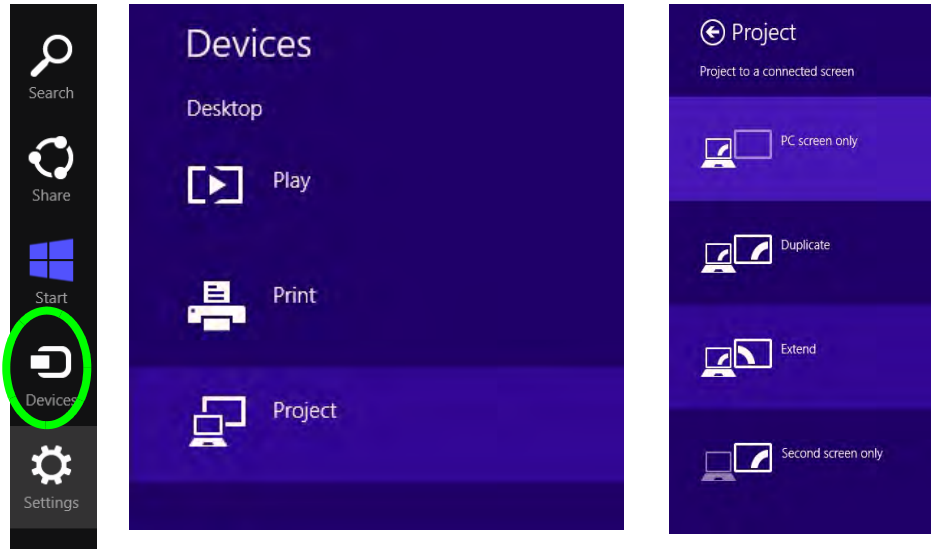
Figure B - 16

**Display > Multiple
Displays (Collage)**

Attaching Other Displays - Devices (Charms Bar)

You can configure attached displays from **Devices** (in the **Charms Bar**).

1. Attach your external display to the external monitor port/HDMI-Out port, and turn it on.
2. Go the **Charms Bar**, select **Devices**.
3. Click **Project** (you may need to click **Second Screen**).
4. Click on any one of the options from the menu to select **PC screen only**, **Duplicate**, **Extend** or **Second screen only**.



Windows Logo Key + P Key Combination

You can use the **Windows Logo Key + P** key combination to quickly bring up the **Second Screen** menu.

You can also use the **Display Switch** button in the **Control Center** to access the menu and select the appropriate attached display mode.

You can also use the **Fn + F7** key combination to quickly access the **Second Screen** menu in **Windows**.

Figure B - 17
Second Screen
(Devices)



Function Key Combination

You can use the **Fn + F7** key combination to toggle through the display options:

- Notebook Only
- External Display Only
- Notebook + External Display

Make sure you give the displays enough time to refresh.

Configuring an External Display In Windows

1. Attach your external display to the external monitor port/HDMI-Out port, and turn it on.
2. Go to the **Screen resolution** control panel (see page 1 - 33) in the Desktop app.
3. Click the **Detect** button.
4. The computer will then detect any attached displays.

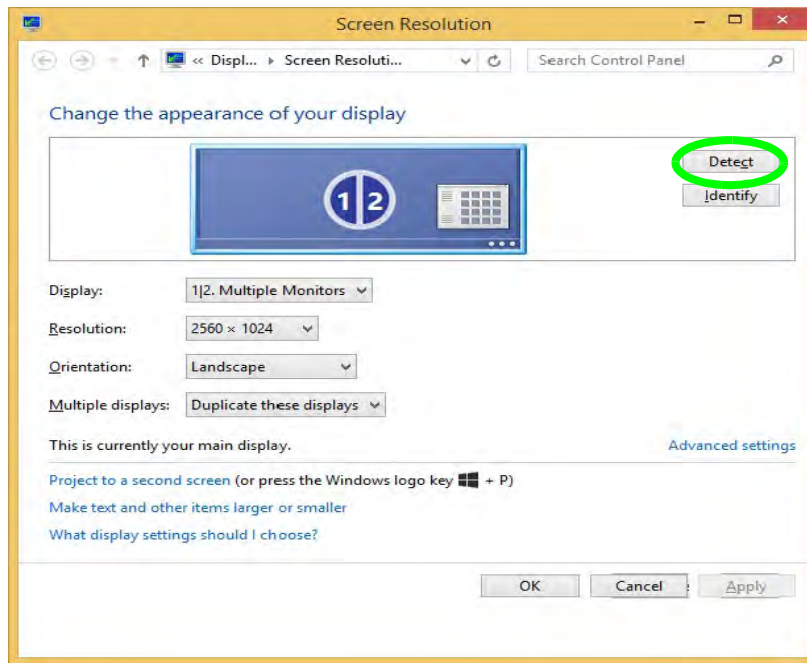


Figure B - 18
Screen Resolution
Multiple Displays

5. You can configure the displays from the **Multiple Displays** menu.

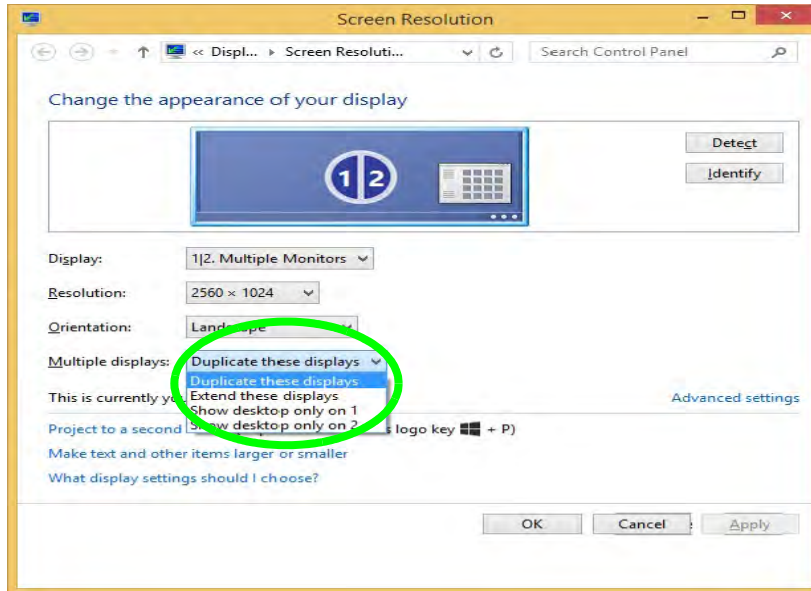
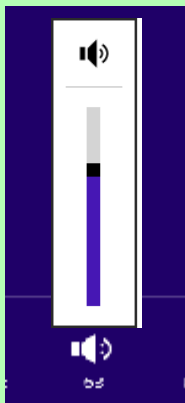


Figure B - 19
Screen Resolution
Multiple Display
Options

- Duplicate these displays - Shows an exact copy of the main display desktop on the other display(s)
- Extend these displays - Treats both connected displays as **separate** devices
- Show desktop only on 1/2 - Only one of your displays is used.

Volume Adjustment

The sound volume level can be set using the volume control in the **Settings** menu in the **Charms Bar**.



HDMI Audio Configuration

HDMI (High-Definition Multimedia Interface) carries both **audio** and video signals. In some cases it will be necessary to go to the **Sound** control panel and manually configure the HDMI audio output as per the instructions below.

1. Go to the **Control Panel**.
2. Click **Sound** (Hardware and Sound) and click **Playback** (tab)
3. Depending on your display, the playback device may be selected, however in some cases you may need to select the audio device and click **Set Default** (button).
4. Double-click the device to access the control panel tabs illustrated overleaf.

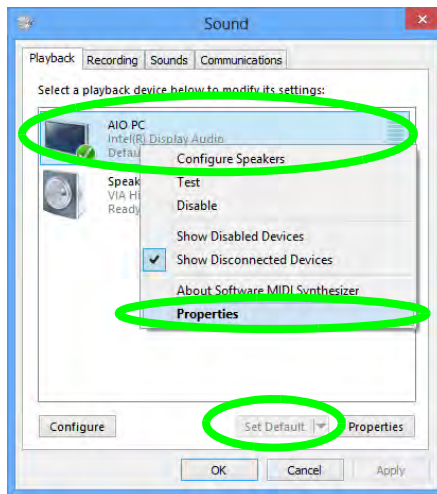


Figure B - 20

**Sound - HDMI
Device (set Default)**

5. Adjust the HDMI settings from the control panel tabs.
6. Click **OK** to close the **Sound** control panel.

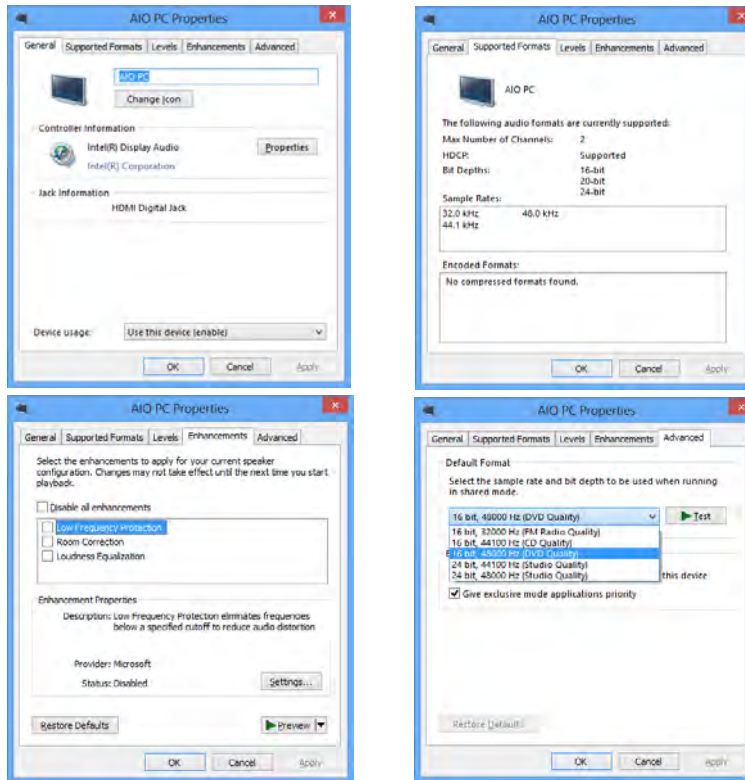


Figure B - 21
HDMI Device Properties



Other Applications

If you are using a third party application to play DVDs etc. from any attached DVD device, you will need to consult the application's documentation to see the appropriate audio configuration (the application must support digital to analog translation).

HDMI Notes

- Connect a device with HDMI support to the HDMI-Out port **BEFORE** attempting to play audio/video sources through the device.
- To play audio sources through your external display's (TV or LCD) speakers you will need to go to the audio configuration control panel on the display and configure the audio input accordingly (see your display device manual).

HDMI Video Configuration

1. Connect an HDMI cable from the HDMI-Out port to your external display.
2. Configure your external display as per the instructions in ***"Attaching Other Displays" on page B - 16.***
3. Set up your external display (TV or LCD) for HDMI input (see your display device manual).
4. You can now play video/audio sources through your external display.

Appendix C: Specifications



Latest Specification Information

The specifications listed in this Appendix are correct at the time of going to press. Certain items (particularly processor types/speeds and CD/DVD device types) may be changed or updated due to the manufacturer's release schedule. Check with your distributor/supplier for details.

Specifications

Processor			Memory
Intel® Core i7-4702MQ (2.2GHz) Mobile Processor 6M L3 Cache, 22nm (22 Nanometer), DDR3L-1600MHz, TDP 37W	Intel® Core i3-4000M (2.4GHz) Mobile Processor 3M L3 Cache, 22nm (22 Nanometer), DDR3L-1600MHz, TDP 37W		Dual Channel DDR3L Two 204 Pin SO-DIMM Sockets Supporting DDR3L 1600 MHz Memory Modules (<i>real operational frequency depends on the FSB of the processor</i>) Memory Expandable up to 16GB Compatible with 2GB, 4GB or 8GB Modules
Intel® Core i7-4600M (2.9GHz) Mobile Processor 4M L3 Cache, 22nm (22 Nanometer), DDR3L-1600MHz, TDP 37W	Intel® Pentium® 3550M (2.3GHz) Mobile Processor 2M L3 Cache, 22nm (22 Nanometer), DDR3L-1600MHz, TDP 37W		
Intel® Core i5-4330M (2.8GHz) Mobile Processor 3M L3 Cache, 22nm (22 Nanometer), DDR3L-1600MHz, TDP 37W	Intel® Celeron® 2950M (2.0GHz) Mobile Processor 2M L3 Cache, 22nm (22 Nanometer), DDR3L-1600MHz, TDP 37W		
Intel® Core i5-4300M (2.6GHz) Mobile Processor 3M L3 Cache, 22nm (22 Nanometer), DDR3L-1600MHz, TDP 37W	Core Logic Mobile Intel® HM86 Express Chipset		Video Adapter Intel® Integrated GPU (Intel® HD Graphics / Intel® HD Graphics 4600): Dynamic Frequency Intel® DVMT Shared Memory Architecture up to 1748MB
Intel® Core i5-4200M (2.5GHz) Mobile Processor 3M L3 Cache, 22nm (22 Nanometer), DDR3L-1600MHz, TDP 37W	Display 21.5"(54.61cm) FHD (1920 * 1080) 16:9 Panel		Microsoft DirectX®10 Compatible (Intel® HD Graphics) Microsoft DirectX®11 Compatible (Intel® HD Graphics 4600)
Intel® Core i3-4100M (2.5GHz) Mobile Processor 3M L3 Cache, 22nm (22 Nanometer), DDR3L-1600MHz, TDP 37W	Model B Only: Multi Touch Screen		BIOS One 48Mb SPI Flash ROM AMI™ BIOS

Storage	<p>One * RS232 Serial COM Ports Two * PS/2 Ports One DC-in Jack</p>	<p>Intel® Dual Band Wireless-N 7260 (2*2 802.11 a/g/n) Half Mini-Card PCIe WLAN + Bluetooth Combo Module (Factory Option)</p>
<p>One Changeable 2.5" 9.5 mm (h) / 7mm (h) SATA (Serial) Hard Disk Drives</p> <p>One Changeable 3.5" 25 mm (h) SATA (Serial) Hard Disk Drives</p> <p>One 12.7 mm Super Multi/Blu-ray Combo SATA Optical Device Drive (Factory Option)</p>	Card Reader <p>Embedded Multi-In-1 Push-Push Card Reader</p> <ul style="list-style-type: none"> - MMC/ RS MMC - SD/ Mini SD / SDHC/ SDXC - MS/ MS Pro/ MS Duo <p>Note: Some of these cards require PC adapters that are usually supplied with the cards.</p>	<p>Intel® Wireless-N 7260 (2*2 802.11 b/g/n) Half Mini-Card PCIe WLAN + Bluetooth Combo Module (Factory Option)</p> <p>Intel® Centrino® Wireless-N 2230 2*2 (802.11 b/g/n) Half Mini-Card PCIe WLAN + Bluetooth V4.0+HS Combo Module (Factory Option)</p> <p>802.11b/g/n WLAN Half Mini-Card Module (Factory Option)</p> <p>Combo WLAN (802.11b/g/n) and Bluetooth v4.0 LE Half Mini-Card Module (Factory Option)</p> <p>2.0M FHD PC Video Camera Module (Factory Option)</p>
Audio	Slots	Power Management
<p>High Definition Audio Built-In Microphone 2 Built-In Two 3W Speakers</p>	<p>ExpressCard/34/54 Slot</p> <p>One Mini Card Slot for Combo WLAN and Bluetooth Half Mini-Card Module with PCIe & USB Interface</p> <p>One Internal USB Port for RF Keyboard & Mouse Dongle</p>	<p>Supports Wake on LAN Supports Wake on USB Supports Wake on PS2</p>
Interface	Communication <p>Built-In 10/100/100 Mb Base-TX Ethernet LAN</p>	

Specifications

Power	Environmental Spec
<p>Full Range AC/DC Adapter – AC in 100 - 240V, 50 - 60Hz DC Output 19V, 4.74A (90 Watts)</p> <p>Removable 6 Cell Smart Lithium-Ion Battery Pack, 62.16WH (Factory Option)</p>	<p>Temperature</p> <p>Operating: 5°C - 35°C</p> <p>Non-Operating: -20°C - 60°C</p> <p>Relative Humidity</p> <p>Operating: 20% - 80%</p> <p>Non-Operating: 10% - 90%</p>
Security	Physical Dimensions & Weight
<p>Security (Kensington® Type) Lock Slot</p> <p>BIOS Password</p> <p>Trusted Platform Module 1.2</p>	<p>525mm (w) * 49mm (d) * 418mm (h)</p> <p><u>Model A:</u></p> <p>7Kg with ODD</p> <p><u>Model B:</u></p> <p>7.3Kg with ODD</p>
Operating System	
Windows® 8.1	
Design Features	
<p>Textured Finish</p> <p>VESA MIS-D 100 (100mm * 100mm)</p>	
LED Indicators	
Power/Suspend, Battery/HDMI-In, HDD/ODD, Airplane Mode, CCD	